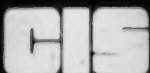


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**U.S. ROLE IN INTERNATIONAL EFFORTS TO CON-
TROL AND PREVENT THE GLOBAL SPREAD OF
THE AIDS EPIDEMIC ON U.S. FOREIGN POLICY**

HEARING
BEFORE THE
COMMITTEE ON FOREIGN RELATIONS
UNITED STATES SENATE
ONE HUNDREDTH CONGRESS
FIRST SESSION

DECEMBER 9, 1987

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U.S. ROLE IN INTERNATIONAL EFFORTS TO CONTROL AND PREVENT THE GLOBAL SPREAD OF THE AIDS EPIDEMIC

WEDNESDAY, DECEMBER 9, 1987

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met at 2:32 p.m., in room SD-419, Dirksen Senate Office Building, the Hon. Claiborne Pell (chairman of the committee) presiding.

Present: Senators Pell and Helms.

Chairman PELL. The Committee on Foreign Relations will come to order.

The AIDS epidemic is a crisis for industrial and developing nations alike. We know that 5 to 10 million people throughout the world are already infected with the HIV virus. Within 5 years, there may be between 50 to 100 million people more infected worldwide.

At the present time there is no cure, no vaccine. Six years after its discovery, AIDS remains a fatal disease not respecting political, geographic, or social borders. Nearly every nation in the world has reported cases of it.

Over 10,000 cases have been reported in the developing world, which now accounts for an increasing percentage of the global total. If the spread of the epidemic is as rapid and pervasive as some experts predict, the composition of the U.S. foreign aid program could be radically changed.

In June 1987, President Reagan joined other industrial country leaders at the economic summit in Venice in issuing a statement on AIDS, characterizing the disease as one of the biggest potential health problems of the world, and urged that all nations be encouraged to fully cooperate with the World Health Organization and support its AIDS-related activities.

This hearing this afternoon was called at the suggestion of the ranking minority member, Senator Helms, and I believe will serve a very good purpose.

It is to consider the growing dimensions of the AIDS crisis, its implications for our foreign aid program, and our national security, and the American response to international efforts to prevent and control the spread of the AIDS virus, and to explore what additional steps our country can take to enhance the total global effort to conquer AIDS.

Senator Helms.

OPENING STATEMENT OF SENATOR HELMS

Senator HELMS. Thank you, Mr. Chairman. I am sure all of us wish that this series of hearings could have occurred earlier. But we are mindful of the press of business we have here in the committee and in the Senate as well.

But in many ways the delay, even though somewhat understandable, is not atypical of what I believe to be the inadequate response of the Government in the United States and throughout the world, as a matter of fact, to a plague which could very well threaten the foundations of civilization.

What has surprised me about this response, or lack thereof, has been the total absence of any sense of urgency in containing the spread of AIDS.

I have been a little bit weary with constantly being told that there is no evidence of this, there is no evidence for that, or there is insufficient data upon which to base projections and so on and on and on, ad infinitum.

I am not saying that these statements are untrue. But nobody knows for sure. I think what I am saying is that these kind of statements confirm the suspicion that we have done too little too late and that this process of fundamental indifference, both nationally and internationally, somehow must be brought to an immediate halt.

I think I should be direct in saying, Mr. Chairman, that I do not have much confidence in the ability of entrusting the health and safety of the American people to various international organizations, and there is more than one. But the World Health Organization is one of them.

Our primary duty is to protect the American people from this plague. And in that effort, perhaps we can assist other countries in protecting their own populations.

If we rely instead on vague programs of imperfect design and limited dimension under the misdirection of the United Nations and others, we are trifling with the lives of what could turn out to be millions of American citizens. And indeed, in terms of generations, with our very survival as a nation.

So, it is my hope that some of the nonanswers we have been receiving for months, even for years, from our own Government, and from other governments, will become real answers and not just evasions. And I hope that this process will mark a beginning in that direction.

Now, Mr. Chairman, I ask unanimous consent that at the conclusion of my remarks, eight letters on this subject be included. Letters to which I have received either no answer, or a totally unsatisfactory answer.

I also ask unanimous consent, Mr. Chairman, that there be included also a copy of the charter of the Centers for Disease Control, as it appears in the U.S. Government Manual.

Chairman PELL. Without objection, those letters and that document will be included in the record.

[The information referred to appears in the appendix.]

Senator HELMS. Thank you very much, Mr. Chairman.

Chairman PELL. Thank you very much, Senator Helms. In the hearing today we have got quite a few witnesses. There are always time pressures, so as you know you will all be limited to 10 minutes in your statements.

And the light will go on yellow when you reach 9 minutes. And then it will be accompanied by a bell, and become red when it is 10 minutes to remind you that your 10 minutes is up. It is not that we are not interested in what you have to say. But we have a lot to listen to this afternoon.

Our first witness will be Dr. James Mason, Director of the Centers for Disease Control, Atlanta GA. Dr. Mason.

STATEMENT OF DR. JAMES O. MASON, DIRECTOR, CENTERS FOR DISEASE CONTROL, ATLANTA, GA

Dr. MASON. Mr. Chairman, Senator Helms, in the United States more than 48,000 cases of AIDS and over 27,000 deaths have been reported since 1981.

We estimate that there are between one and one and a half million people infected with the AIDS virus. And we project that by the end of 1991, there will be 270,000 cases of AIDS in the United States, and they will have caused 179,000 deaths.

Sixty-five percent of the cases have been among homosexual and bisexual males, and 25 percent among those who abuse intravenous drugs. The number of cases among heterosexual adults is increasing. However, the proportion has remained a stable 4 percent.

The spread of HIV infection and disease worldwide is still by the three routes of transmission initially described. It is contracted through sexual contact, inoculation of blood, largely through the sharing of contaminated needles, and perinatally by infants from infected mothers.

The infection cannot be contracted casually through normal household or workplace contacts, or by being bitten by a mosquito.

CDC's AIDS responsibilities fall into two major categories: First, research to learn about the natural history, distribution, and spread of the disease; and second, prevention and control efforts that rely on information, education, and risk reduction activities.

Surveillance of AIDS cases began in 1981. As a result of diligent efforts by State health departments with support from CDC, AIDS has been one of the most completely reported diseases in this country.

A considerable body of information has been collected on the extent of AIDS, the distribution of HIV infection, and the modes of HIV infection.

A report on our current knowledge of HIV infection in the United States was given to the Domestic Policy Council on November 30, 1987. I would like to provide a copy of that report for the record, if I might.

[The information referred to appears in the appendix.]

Dr. MASON. Since the beginning, as far back as 1982, when the first AIDS guidelines were published, the Public Health Service has been engaged in information and education activities to reduce the risk of spread of the human immunodeficiency virus—HIV.

The Public Health Service issued its "Information Education Plan to Prevent and Control AIDS in the United States" in March 1987. All the major components of the program—activities directed toward the public, school- and college-aged youth, persons at increased risk of infection, and health care workers—were in place in 1987.

CDC has funded a variety of AIDS prevention programs directed primarily at persons at increased risk or who are infected.

Through counseling and testing it is possible to deliver risk reduction messages directly to infected individuals, and those at risk of becoming infected. Testing of people whose behavior increases their risk of HIV infection is encouraged in all appropriate medical settings.

A cornerstone of the program directed toward the public was the intensive national public information campaign that was initiated in October as AIDS Awareness and Prevention Month. This campaign will continue during 1988.

A school health education program to prevent the spread of AIDS was initiated in 1987 to help local school boards, parents, and school personnel plan, implement, and evaluate educational efforts to prevent morbidity and mortality due to HIV.

It incorporates principles of AIDS education approved by President Reagan to enable schools and other organizations to determine AIDS education strategies that are consistent with community values and needs.

A special minority initiative exists, because nearly 40 percent of reported AIDS cases occur among blacks and Hispanics.

CDC has provided health workers with guidelines and information to assist them in effectively participating in the fight against AIDS. To inform health workers about AIDS and HIV transmission, CDC provides scientific technical information, training in the use of HIV laboratory tests, AIDS health education risk reduction, counseling and testing, and information about AIDS in the workplace.

The urgent need for a global effort to combat AIDS is clear. The 1986-87 World Health Assembly charged WHO to provide leadership in the global struggle against AIDS. The CDC AIDS Program has been designated as one of the WHO collaborating centers for AIDS and HIV.

In fiscal year 1987, CDC AIDS program staff, at the request of WHO, made 14 trips to WHO headquarters in Geneva to provide technical assistance. CDC has made professional staff available for long-term assignment to assist international organizations to help in worldwide AIDS prevention and control.

CDC is heavily involved in a major AIDS study in Kinshasa, Zaire, which has led to a fuller understanding of the epidemiology of AIDS in Africa. This project is a collaborative effort between the Government of Zaire, CDC, the National Institutes of Health, the Armed Forces Institute of Pathology, and the Belgian Institute of Tropical Medicine.

The project, which maintains a surveillance system and conducts epidemiologic studies, has determined how the disease is spreading in central Africa. The Zaire study has clarified the modes of transmission of HIV infection in infants, children, and adults in Africa.

It has been determined that heterosexual contact accounts for 80 percent or more of the cases, blood transfusion and reuse of needles for 5 to 15 percent, and mother to child transmission for 5 percent or less.

Identification of the quantitative importance of blood transfusions in the spread of HIV infection, particularly to children, has resulted in effective preventive programs to protect the blood supply in the largest city in sub-Saharan Africa.

Other nations look to CDC as a source of expert technical assistance in disease prevention and control. The prevention and control of HIV infection is no exception. During 1987, CDC provided assistance in the development of national AIDS plans for a number of countries, including Columbia, Haiti, Panama, Rwanda, and the Sudan.

We have collaborated with WHO in developing prototype protocol and data collection instruments for use in planning national programs to measure high-risk sexual behaviors in various populations.

Training in AIDS surveillance was provided to Australia, Canada, France, and the United Kingdom. We have conducted training in serodiagnosis of HIV infection in Brazil, Mexico, and Egypt.

CDC has worked closely with scientists and public health officials from other nations. Scientific collaborative efforts are underway or near completion with scientists in France, Canada, Brazil, Zaire, Ivory Coast, and other countries.

Under authority of the Immigration and Nationality Act and the Public Health Service Act, the PHS has promulgated the Medical Examination of Aliens Regulations. On August 30, 1987, the regulations were amended by adding HIV infection to the list of "Dangerous, Contagious Diseases" for determining eligibility for visas.

This action was approved by President Reagan. As a result, the Department of State may deny visas, and the Immigration and Naturalization Service may deny admission of aliens with HIV infection who are subject to medical examination, such as persons seeking permanent residency.

I will be happy now to answer any questions that you may have. [The prepared statement of James Mason may be found in the appendix.]

Senator HELMS [presiding]. Thank you very much. Dr. Fauci.

STATEMENT OF DR. ANTHONY S. FAUCI, DIRECTOR, NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES, NATIONAL INSTITUTES OF HEALTH, BETHESDA, MD

Dr. FAUCI. Senator Helms, I am addressing you as the coordinator of AIDS research for the National Institutes of Health, the NIH.

The NIH is responsible for carrying out basic and clinical research on the acquired immunodeficiency syndrome. The NIH's AIDS research program involves a many-faceted strategy for providing tools in the battle against AIDS, both here and abroad.

Therefore, there are a number of specific research programs and individual projects funded through the NIH that are international

in scope. Most of these projects which have a foreign focus or component seek to answer questions on the natural history of the disease and the mechanisms through which the human immunodeficiency virus, HIV, causes disease.

In addition, the NIH has a number of collaborative efforts between the United States and foreign scientists that address a broad range of basic and clinical questions. I have submitted in my written statement an outline and overview of the NIH's research endeavors and accomplishments.

Very briefly, they include the epidemiology and natural history of the etiologic agent which was identified, cloned, sequenced, and the functions of its genes delineated; a delineation of the pathogenesis of the disease; an extensive drug screening and development program which has resulted in at least one drug that has now been shown in controlled clinical studies to prolong the lives of patients who have HIV infection and advanced disease; and finally a vaccine development and evaluation mechanism which has resulted most recently in the first HIV vaccine candidate being tested in phase 1 studies.

With the few minutes that I have, Senator Helms, I would like to focus on the international research efforts of the NIH.

There are a number of projects currently underway in which scientists at the NIH or at institutions we support are working in countries where HIV infection is known to be widespread, particularly in many parts of Africa and the Caribbean.

Project SIDA, which was alluded to by Dr. Mason, is a multidisciplinary study based in Kinshasa, Zaire. It is a research project to study AIDS in Zaire that was jointly initiated by the NIH, the CDC, the Institute of Tropical Medicine in Antwerp, Belgium, and the Zairian Ministry of Health.

Similar studies supported by the NIH on the natural history of the disease, modes of transmission and the nature of the virus are underway in various populations in Kenya, Rwanda, Ghana, and the Sudan.

Additional NIH mechanisms support collaborative and contractor studies with several European and African countries. Research programs on AIDS that are ongoing in the Caribbean include studies not only on HIV, but also on a related virus called HTLV-1. These studies are examining the effect of HIV infection on pregnancy outcome and on the transmission of HIV to the sexual partners and children of Haitian AIDS patients.

In addition, the National Institute of Allergy and Infectious Diseases, NIAID, has begun a collaborative effort with the Pan American Health Organization—PAHO—to study AIDS in the Caribbean. Through this program, further studies on AIDS transmission and natural history in Haiti are being conducted. In Trinidad, scientists are examining racial and genetic factors that influence HIV acquisition and disease expression.

With support from the NIH, PAHO's Caribbean Epidemiology Center—CAREC—has established a specialized research facility to support studies on the natural history and epidemiology of AIDS in the countries represented by CAREC's 19 participating governments.

The NIH is also encouraging international research on AIDS by strengthening scientific linkages between the United States and foreign investigators. To facilitate this, the NIH is awarding grants to U.S.-based institutions to establish what we call programs for International Collaboration in AIDS Research—ICAR. These programs will link U.S. institutions to research units at overseas sites resulting in collaborative efforts in biomedical research. The major portion of ICAR research will be conducted in the foreign location.

Perinatal and pediatric HIV infection and heterosexual transmission of HIV are of special interest in the ICAR program. Another area of research emphasis is the variability in HIV isolates in different geographic areas and the correlation of these variations with clinical and epidemiologic resistance factors. In addition, these ICAR grants will focus on the similarities and differences in the clinical and epidemiological presentation of disease.

To promote further international scientific cooperation in combating AIDS, the NIH will launch in fiscal year 1988 the International Postdoctoral Research Program in AIDS. This program will support collaborative research between U.S. and foreign scientists who wish to enhance their knowledge and skills in AIDS research and to stimulate cooperation and information exchange.

AIDS research has also been added to a number of U.S. foreign collaborative biomedical research programs, both formally and informally. For example, the NIH has recently added an AIDS panel to the United States-Japan Cooperative Medical Science Program. AIDS has also been added as an area of emphasis to the NIH French Agreement for Cooperation in the Biomedical Sciences. In addition, a number of AIDS-related meetings and collaborative projects have been initiated under the United States-German Agreement on Cooperation in Biomedical Research and Technology. In these cases, the agreements foster exchange of information among scientists and the development of collaborative research projects.

Under existing agreements, clinical protocols for NIH-sponsored drug evaluation studies, which are now currently being carried out in the United States, have been provided to German and French scientists to assist them in the development of protocols that would provide data comparable to those obtained in the United States trials. In this way, the data can be pooled and be that much more meaningful.

In this regard, in 1987, the NIH initiated a multicenter study of the lung complications of HIV infection in five centers in the United States. This program has been expanded now to include research institutions from both Germany and France that will participate in the design and implementation of these studies.

The NIH has also promoted international collaboration in AIDS research through its extensive involvement in a series of international conferences on AIDS, which are held annually.

In 1987, the NIH sponsored a workshop on AIDS in Africa to review selected research projects and to provide a forum for the discussion of the future direction and focus of AIDS research in Africa.

The NIH has a close working relationship with the World Health Organization—WHO—and with the staff of its AIDS program.

NIAID has been designated as a WHO collaborating center for AIDS and participates in frequent meetings. In the future, NIAID will provide scientific advice and in some cases research reagents to WHO and to WHO-sponsored investigators.

It is anticipated that scientific collaboration between the NIH and scientists in other countries will continue and increase as knowledge about this disease increases, and as the incidence of disease in these other countries grows.

In addition to natural history and epidemiology research, it is likely that specific studies will have to be done outside of the United States.

In summary, the NIH research effort on AIDS is directed at a disease that knows no geographical boundaries. Our extensive research program on AIDS, combined with our international collaborative projects, represents a multifaceted approach toward fighting this global epidemic.

This concludes my prepared statement, Senator. I will be pleased to answer any questions.

[The prepared statement of Anthony Fauci may be found in the appendix.]

Senator HELMS. Thank you very much. Dr. Allred.

**STATEMENT OF DR. THOMAS J. ALLRED, CHIEF OF PATHOLOGY,
DOCTOR'S HOSPITAL, WEST PALM BEACH, FL**

Dr. ALLRED. Thank you, Senator. I am delighted to be here in such distinguished company.

The witnesses you have heard, and others you will hear this afternoon, are nationally and internationally recognized experts in the field of AIDS research.

I, by contrast, am a generalist. I am a board certified pathologist, and presently serve as chief of pathology in a medium-sized community hospital in south Florida. I am also board certified in emergency medicine, and worked for a number of years in that specialty.

The perspective that I bring is, therefore, quite different from that of the researchers and academicians from whom you have heard or will hear.

I have been asked to testify on the impact of AIDS on the medical community at large, and the specific concerns that we as community physicians have with regard to the current global pandemic of AIDS.

It would be presumptive for any one individual to try to speak for all of American medicine. But I can, I think, give you some understanding of our feelings as practicing physicians in one community in which AIDS is viewed as a major problem.

I practice in Palm Beach County, FL. Florida has the third highest incidence of AIDS in this country, following New York and California. And our county, Palm Beach County, has the third highest incidence of AIDS in the State.

This year, 1987, we will have almost 200 new cases of AIDS in our county, which is approximately 1 percent of the national total.

In sharp contrast to the national figures of 3 to 4 percent of all cases being in heterosexuals and representing presumed heterosexual-

ual transmission, in Palm Beach County this year the percentage of heterosexual cases will have risen to 12.5 percent of all cases. That is one case in eight.

In addition to heterosexual transmission, homosexual transmission, and transmission by IV drug use, we also have a large immigrant population which is contributing to our high incidence.

The attitude of the medical community ranges from deep concern to fear. For most physicians, caution is the order of the day in almost all patient contacts.

I was shocked to recently discover that disposable latex and vinyl gloves are not currently available in our community. There is a 4-month back order from all suppliers.

Production and supply themselves have not diminished. But rather usage has soared so tremendously as health care workers of all disciplines attempt to insulate themselves from potentially infectious tissue or body fluid contact.

While I am not personally aware of cases of AIDS sufferers or HIV infected individuals being denied care in our community, I am aware that many physicians, including myself and my colleagues, increasingly use a subtle form of what might be called cost-benefit analysis in our patient care settings.

We ask ourselves, does the possible benefit to the patient outweigh the potential risk to me and to other health care workers? In fairness, at this time, the answer is usually "yes." But not always. And it may not remain that way.

May I offer a personal case in point. I am a member of the largest group of pathologists in Florida. Our group provides laboratory services at 12 major community hospitals in south and central Florida.

As a group, we have adopted a policy of not performing autopsies on AIDS deaths, except under the most exceptional circumstances. As a group we simply felt that facilities are not adequate in our community hospitals to safeguard us, our assistants, and others, such as housekeeping personnel, who aid in the cleanup.

This same feeling may eventually extend to the operating room, endoscopy suites, radiology, and other patient care areas, especially if the incidence of AIDS and HIV positively continues to soar.

It is this very uncertainty of the situation that is of most concern to us as practicing community physicians. All too often we do not know that a patient has AIDS or is HIV positive until they have been hospitalized for some time.

The affected individual's assumed right to privacy or confidentiality may be a protection for them. But it certainly does not protect us as health care workers.

Some time ago I was asked by our chief of surgery to begin testing all preoperative patients for the presence of HIV. Other surgeons have made the same request since that time.

Following the recommendations of the CDC I have counseled against that practice, at least at this time. But pressure continues to mount.

Our infection control committee recently established a policy of employing AIDS precautions on all patients, inasmuch as for the present we do not know which patients may or may not have HIV infection.

Physicians in our community are very concerned about the inroads that HIV may be making into our community heterosexual population at large. As I previously noted, about 12 percent of cases of AIDS in our county this year represent heterosexual transmission, and the percentage of new HIV positivity in heterosexuals may be even higher.

To us as practicing physicians, the confirmation of HIV positivity and the clinical diagnosis of AIDS both carry the same ultimate significance. Both are absolute death sentences. It is only a question of time.

Many of us deeply fear that the central African experience is beginning to be repeated in south Florida. That HIV infection is being transmitted heterosexually at significant levels, and that we are now on the lower, flatter level of an accelerating geometric curve that may eventually lead to infection of a significant fraction of our population.

We find it grimly ironic that the CDC has required, through the Public Health Service, that HIV infection, or in other words laboratory confirmation of HIV positivity, be added to the list of "Dangerous and Contagious Diseases" which causes the Immigration and Naturalization Service to deny thus affected aliens admission to the United States. Dr. Mason referred to this earlier. The irony is that, to my knowledge, the CDC has not made the same recommendation to State public health departments, that HIV positivity be reported to them by physicians as a dangerous and contagious disease.

We do not report it to the State in Florida. And indeed in California, where I did most of my emergency medicine practice, it is a crime for a health care professional to report HIV results to anyone but the patient or his spouse. And all HIV testing must be done in an encoded fashion.

I personally view that as an outrage. It seems that in this regard, the health care system has become captive to the preferences of the few at the expense of the needs of the many.

Certainly it is the perception of many physicians at my level in our community that the Government agencies entrusted with protecting the public health are doing too little and perhaps too late.

I hope that my remarks have been of some assistance to you in assessing the impact of the global AIDS epidemic on the practicing medical community. I will be happy to answer any questions that you or other members of the committee may have.

[The prepared statement of Thomas Allred may be found in the appendix.]

Chairman PELL [presiding]. Thank you very much, Dr. Allred. I have a couple of questions, and then I would defer to the ranking member, whose suggestion it was for this excellent hearing.

Why would it seem to you that there would be such a high percentage of AIDS in Palm Beach? What is the reason for it?

Dr. ALLRED. Why do we have such a high percentage of AIDS in Palm Beach?

Chairman PELL. Your said it was the highest percentage in the State or in the country.

Dr. ALLRED. The concentration of AIDS in Florida is in particular in south Florida.

Dade County, where Miami is, has the highest concentration. Broward County, where Fort Lauderdale is, immediately to the north, has the next highest concentration.

Chairman PELL. What is the reason for it?

Dr. ALLRED. We have the third highest concentration. I believe that the modes of transmission are the same in our county as everywhere else. These are a large homosexual population, extensive IV drug use, and a prominent immigrant population. We have numerous Haitian immigrants in our community. I think those three factors together, as elsewhere in the country, contribute to our high incidence.

Chairman PELL. I see. You do not happen to know what the percentage of AIDS is in Haiti. Would that be high too? Or not?

Dr. ALLRED. The percentage of AIDS across the board in Haiti?

Chairman PELL. Yes. In Haiti.

Dr. ALLRED. No. I do not know. I know that the percentage of heterosexual transmission is perhaps 85 percent there. Maybe Dr. Mason can answer that question.

Chairman PELL. Dr. Mason, can you? And also, when I was a young man, infantile paralysis was the great killer, and we were all frightened to death of it. Then we found a vaccine, and nobody ever hears of it now.

Is it your view that within a half dozen years or so we will have developed a vaccine and that this disease also will recede into the background?

Dr. MASON. I will respond first. The number of infected in Haiti is probably unknown.

The number of cases reported from Haiti is a high number in proportion to its population. But I doubt very much that a comprehensive study has been done there to know the number of infected.

I would rather defer to Dr. Fauci, who is the international expert on vaccine development, to give you a projection on when a vaccine might be available.

Dr. FAUCI. If we are fortunate enough to develop a vaccine for AIDS that is safe and effective, it is likely that it would not be readily available for widespread use until well into the 1990's.

Vaccine development and testing go in different phases. In September and November, phase 1 testing of the first two candidate vaccines began. Phase 1 ask the question, "Is it safe to at least try this particular candidate?" If it proves to be safe, then we will move to the next phase, which asks about proper dose and whether or not it is immunogenic. If everything goes well in phase 1 and phase 2 studies, you get to the third phase which asks, "Is it efficacious? Will it protect individuals from HIV infection?" The whole process will take several years.

So, at best, we will be in the mid-1990's before we have an effective vaccine.

Chairman PELL. But is there any doubt in your mind that that vaccine will be developed?

Dr. FAUCI. There is no guarantee that there will be a vaccine, Mr. Chairman. This particular virus is really unprecedented in the annals of biomedical research. One of the major problems is that we do not yet know what constitutes protective immunity. For example, we knew long before we had a polio vaccine that if you de-

veloped a certain type of an antibody against polio, that you were protected, that you would not go on to develop paralysis or serious illness. Right now, given the very unusual nature of this virus, we still do not know what constitutes effective immunity. So, we cannot project that if we get this type of immunity, we will have an effective vaccine.

So there is no guarantee. We are cautiously optimistic. But there is no guarantee.

Chairman PELL. Thank you very much. Senator Helms.

Senator HELMS. Mr. Chairman, thank you very much. Dr. Allred, among all of us up here, you are the only practicing physician. Do you treat AIDS patients?

Dr. ALLRED. I do not treat them myself. As a pathologist I regulate the laboratory practice in the hospital.

I do rounds on the clinical wards and consult on many of the cases. I am aware, I think, of every AIDS case that does come into our hospital.

Senator HELMS. So, you are, at least, on kind of the front line of this thing.

Your comments to me, I followed them in your script, as you were delivering your statement, I appreciate all of the witnesses coming here. And it is of particular interest to hear your comments about the reaction among the health care personnel.

Some of these questions will be a little bit repetitive. But let me ask them just so we can have them in context. What is the feeling in the medical community, in your judgment, about possible resolution of the AIDS crisis?

Now, we have heard into the 1990's there may be a vaccine. But how does the medical community regard that?

Dr. ALLRED. We are all very concerned. As Dr. Fauci put it, this is unprecedented, really, in the history of the world.

We have certainly had global pandemics before, such as the Black Death in the Middle Ages and the influenza pandemic in 1919-20. And Senator Pell referred to, the polio epidemics in the 1940's and the 1950's. But we have never had an epidemic quite like this one.

There is a great deal of skepticism in the medical community, at least in our medical community in south Florida, as to what the resolution will be. We can look at the possible modes in which this disease might be approached.

I think that the work that has been done at NIH with regard to drug treatments is praiseworthy. And Dr. Fauci and his colleagues are to be complimented with the work that has been done with AZT.

As he said, AZT does prolong the life, but perhaps by only 12 to 18 months, the initial studies would indicate, in AIDS sufferers. So, we have not cured their disease. We have added 12 to 18 months to their suffering.

If you look at the PDR, the Physician's Desk Reference, which has several thousand drugs in it, you will find only five antiviral agents. We have known about viruses for many, many years and have identified viruses as causes of disease for many, many years. And we only have five drugs, not counting AZT, that are currently used in the treatment of viral diseases.

Those drugs each have a very specific indication and are honestly of limited utility. I do not mean to say that they have no utility. But they have limited utility. So most practitioners in the community are not optimistic about antiviral drugs at this point. We are hopeful but not optimistic with regard to drugs.

With regard to antiHIV vaccines, I think Dr. Fauci has stated the case succinctly. There are many viral illnesses today for which we do not have vaccines. Those of you that have small children all had chickenpox among your children.

My wife and I have eight children, and every one of the eight has had chickenpox. There is no vaccine for chickenpox. As I said, there are many viral diseases that do not have effective vaccines.

Retroviruses have been known for many years. One of the more common is feline leukemia. There is a vaccine for feline leukemia virus. I do not pretend to be a veterinarian, but it is my understanding that that is not a terribly effective vaccine.

There are some particular concerns with developing vaccines to the AIDS virus. There is considerable heterogeneity in the virus itself, and virus taken from different parts of the world may be a good bit different. Certainly we have many recognized strains of the virus.

Other concerns are perhaps of even greater moment. I read an article recently, I believe it was in *Transfusion*, describing blood recipients who had received or who had developed HIV positivity and AIDS by blood transfusion.

The virus that they had in their blood was analyzed, and then it was compared against the donors from which they had received the blood and the disease. And the virus was found to be different.

This means, the virus is changing from patient to patient, and perhaps within the same patient, it is mutating. This is particularly with regard to the envelope proteins, which is one of the preferred sites against which to develop a vaccine.

So, I think there is some skepticism in the medical community at large as to whether a vaccine will be available any time soon.

The other issue that Dr. Fauci raised is, even if we develop a vaccine, and it causes the body to develop antibodies against the virus, will those antibodies be effective in preventing the disease?

I think at this point we really do not have good evidence that there is any protective immunity against the virus at all. There has not been good correlation between the levels of antibodies in patients that have the virus and the course of their disease or the severity of their disease.

So, I think the consensus, at least in our community in south Florida, is that a vaccine that will be protective to the population at large is not a probability any time soon. We are very skeptical.

Senator HELMS. You certainly have introduced a new apprehension for me.

Dr. ALLRED. There are two other things I would like to address with regard to our attitude toward the AIDS epidemic.

In addition to drugs and vaccine, the great emphasis has been on education in this country. I think that is commendable. I think there have been some significant defects in our educational programs, however.

We are teaching our children to practice safe sex—and we really should not call it “safe sex,” we should be calling it “safer sex.”

To me that is tantamount to telling them, “It is OK to play Russian roulette as long as you only have one round in the chamber. You do not want to play it with three rounds in the chamber.”

Educational programs are tremendous. But I think what we need to be teaching is premarital chastity and marital fidelity, because only there will people find safety.

Again, I think educational programs are to be commended and they should be continued and emphasized as much as possible.

The fourth option for the control of the spread of the disease is isolation. Regrettably to mention the word “quarantine” in association with this disease will get you labeled as a fascist in the press.

Looking at it scientifically, it may not be a feasible option in any case. This is not like measles where 50 or 60 years ago you could put a quarantine sign in the window of the house, and 2 weeks later everything would be fine.

The people that have this virus will have this virus for the rest of their lives. We assume that until they die of the virus, viral-induced disease, or some other disease, if they are in an age group where other natural disease may catch up with them.

The long latency period of the virus, 4 to 10 years perhaps, before the disease becomes manifest, makes identification of viral carriers a further problem. People may be shedding the virus 6 to 15 months before tests would be able to identify them.

They may have viral particles in their blood for 6 to 15 months before they become antibody positive. So, realistically, scientifically, isolation of HIV positive patients, or AIDS patients, “quarantine,” if you want to use that word, is probably not a feasible option at this time. In any case the dislocation to our society would be tremendous.

Senator HELMS. Well, you have described in your statement the attitude of apprehension among the medical care personnel, and I can well understand it.

At Georgetown University Hospital they have the patient use the same eating, dining utensils, the same china, glasses. The AIDS patients and the other patients use the same plates and all.

This happened because there were some protests about using paper plates at the hospital. Now, I mention all this, it might seem a little thing, but I do this to inquire as to your reaction as a hospital staff member yourself.

I guess what I am asking you is, Could you comment on the fears that medical personnel have about the treating of AIDS and the dealing with patients who have AIDS?

Dr. ALLRED. I think caution again is the order of the day. We try to be as cautious as possible in all our connections with patients, and in all our patient encounters.

If we have to do an autopsy in my particular specialty, on a patient with AIDS, we take every possible precaution. We may tend to avoid parts of the autopsy that would run a higher risk, such as cutting bone with a saw. In the operating room, if you have to operate on an AIDS patient, that does happen, of course.

Special techniques are used where a Mayo stand is interposed between the scrub nurse and the surgeon so there are no instruments

handed off. The surgeon picks up and sets down each individual instrument to avoid the possibility of puncturing the skin, and inoculation with blood.

Caution is the order of the day. To some, fear is the order of the day. But I think that may be going too far. I think we are extremely cautious at this point. We just try to take every possible precaution.

In contrast to physicians, I think among some of the paramedical personnel fear is the predominant attitude. That, to some degree, is based on ignorance.

The case you mentioned at Georgetown—at our hospital we do use paper plates. But the indications are that it, the virus, is easily killed in normal sanitation procedures within a hospital. The china should not be a significant risk.

Senator HELMS. You are a reserve military officer, are you not?

Dr. ALLRED. Yes, sir.

Senator HELMS. Army?

Dr. ALLRED. Yes. I served 10 years active duty in the Navy, and then switched to the Army Reserve.

Senator HELMS. Now, the DOD tests once a year. Is that right?

Dr. ALLRED. The DOD tested initially all active service members, all reserve service members, and they test recruits as they are recruited.

Senator HELMS. Just one time?

Dr. ALLRED. They have only been tested one time to date. I do not know of DOD's future plans.

Senator HELMS. Do you have any opinion about whether that ought to be changed or not? Should it be more frequent?

Dr. ALLRED. I think that once only probably is inadequate. Certainly ongoing infections will take place. People who are in the window before they could be diagnosed as having the virus will become identifiable as having the virus. Certainly repeat testing is in order.

Senator HELMS. I have a friend who is an oral surgeon in North Carolina, and I can jolly well tell you that he is worried about it.

It occurred to me that rubber gloves are scarce now. So somebody is buying them. They are not manufacturing any fewer of them. Are they?

Dr. ALLRED. No, sir. I think it is just that they are being used at a much higher rate.

Senator HELMS. Who is buying them and who is using them?

Dr. ALLRED. I think everyone. Everyone from the dentist, everyone in the hospitals, to doctors in their offices. Everyone is using them at a much higher rate in all patient contacts.

Senator HELMS. What is the policy in the military about medical and dental personnel? Do they have any latitude about treating AIDS patients?

Dr. ALLRED. I am not sure I understand your question, sir.

Senator HELMS. I guess I am trying to ascertain whether there is any latitude in the medical profession or dental profession, and particularly in the military, about whether they can choose or not choose to treat.

Dr. ALLRED. It certainly is the standard of the medical profession to take care of sick people. And that is something I do not think any of us want to see changed.

Certainly in the military there is no latitude as far as to whom you will see or whom you will not see as a military physician. You will see the patients presented to you.

And I think in the civilian community doctors are loathe to turn patients away because they may have a disease that may be dangerous to the physician. But they exercise extreme caution in dealing with those patients.

Senator HELMS. Very well. Thank you, Mr. Chairman.

Chairman PELL. Thank you very much. I wondered if Dr. Mason or Dr. Fauci could indicate to us if there are any studies that show the number of hospital personnel who have contracted AIDS in the course of their work.

Dr. MASON. We have some very extensive studies. And I want to mention that they are not related just to cases of AIDS. The studies also included taking blood samples from people who are asymptomatic, to make sure that under the water in this iceberg of infection we were not missing transmission.

To date, we are aware of fewer than 15 cases in the Nation, among 5 million health care workers, who have acquired their disease from the workplace.

In almost all instances, these are individuals who suffered a needle stick injury, where there was a direct injection of blood into them, or there was direct contact between skin and blood of the patients or splattering of mucous membranes.

So, the risk is low in the health care setting. But it is there. And that is why we have promulgated those guidelines that Dr. Allred mentioned. I do not want them to be misunderstood.

We gathered together nearly 100 individuals who were working in patient care, including surgeons and those in other disciplines. And we did not rule out testing of all patients. But the caveat we put on testing was that you cannot identify everyone who is infected by testing in the emergency room, in outpatient status. We would not know whether emergency room patients were infected or not, when they receive treatment, especially for cases during the window between infection and the development of antibodies, when they may not test positive. Therefore, we would like to have people in the health care setting take universal precautions as though everyone is infected.

We do not believe you can relax for a moment. And that is why there is a run on latex gloves. Since 1983, we have been strongly recommending that dentists, physicians, and any other health care worker who is going to come in contact with blood or other body fluids be protected by latex gloves.

And so I guess you could criticize us for taking overdue precautions. But we would like people in the hospital to assume that all blood, whether the patient was tested or not, is positive, so that we can minimize any opportunity of transmission of infection.

Chairman PELL. Is there any danger, when you pick up a telephone, and somebody who has AIDS has used it before you, or when you have the communion cup that is passed around and take

communion, is there any possibility of receiving AIDS in either of those instances?

Dr. MASON. HIV infection cannot be acquired by using a telephone. We have looked at the transmission of a group of diseases, including hepatitis-B, and a lot of diseases that are spread by the respiratory mode, and we have no evidence that the communion cup is a route of transmission of AIDS or these other diseases. We certainly feel again that one ought to be conservative in perhaps wiping it or moving it to a different part. That is not because we have evidence of transmission. But again, we would like to bend over backward to avoid even the slightest possibility.

Chairman PELL. Thank you very much. Senator Helms.

Senator HELMS. I saw Phil Donahue, a little bit of it, before I could get to the set and cut it off, and he had some folks there, and he was operating under the pretext that there is really not anything to worry about. But I do not think the vast majority of the American people feel that way about it.

Let me get to this business of Africa. How do you account for such a heavy incidence, percentagewise, of AIDS in Africa?

Dr. MASON. Wherever those behaviors that result in the transmission of AIDS—sexual behaviors where there are multiple sexual partners, and the transmission of blood, particularly through IV drug abuse or dirty needles or syringes, or blood transfusions—are ongoing, one can expect that this disease will be transmitted. Transmission will be increased particularly if people have lesions that enhance the transmission or the contact between body fluids, such as blood and pus.

There are a number of circumstances that exist in Africa, just like in the United States that allow this disease, which under normal circumstances is not very infectious, to be transmitted easily.

Senator HELMS. Did you say what the percentage of central African population has been infected with the AIDS virus?

Dr. MASON. Well, one has to be very specific about where in Africa, because the occurrence of the disease is spotty, just like it is here in the United States. AIDS in the United States is largely a disease of our central cities. Likewise, in Africa, it is largely a disease of the large, crowded urban areas. And in some urban areas you find that as many as 1 in 8 or 1 in 10 is infected, particularly those who are engaging in multiple-partner sexual intercourse.

Dr. FAUCI. Also, there is a blood supply problem too, because the blood supply is not universally tested in certain cities in central Africa.

For example, in a city like Kinshasa in Zaire, where there is a high prevalence in the population, and where, just a year ago, they did not generally screen the blood, in a regular general hospital you might have over 10 percent of the blood donors infected. Therefore, 10 percent of all of the transfusions in a given day in the hospital would, in fact, be contaminated. So, you have a compounding issue when you have a high prevalence baseline in the population.

Second, in certain regions it is culturally and socially acceptable for a married man to have several female sexual partners. If a sexually transmitted disease is involved, this is a perfect setup for it to be transmitted.

And third, other cofactors, like sexually transmitted diseases and genital ulcerations, give an increased possibility of transmitting the virus. So, if you add up prevalence, sexual practices, and cofactors, you have a snowballing effect. And in certain areas in central Africa, that is what is going on.

Senator HELMS. It kind of feeds on itself, over into the blood supply.

Dr. FAUCI. Yes.

Senator HELMS. You say that the testing, one of you, maybe it was Dr. Mason, you said, as I understood it, that the test cannot pick up all infected people. Is that what you said?

Dr. MASON. No. What I said is that there is a period of time between contracting the virus and the time antibodies develop and can be detected. Also, the number of infections is simply a representation of the number infected with a virus that has potentially a long incubation period to development of disease, at least 7.5 years on the average.

With measles, we can count cases, and then we also know fairly well the number of infections, because they are one and the same due to a very short incubation period. But when we get into a disease with a long, measured-in-years, incubation period, the number of cases does not represent how much transmission is going on in the community.

Therefore, it is desirable to know, not only how many cases have been reported, but how many infections exist in any community setting. That tells you really what kind of transmission is going on. You will not know for another 5 to 7 years, if you wait for cases to be reported.

Senator HELMS. Two more questions, Mr. Chairman. And then we will go on to the next panel.

Please reassure me that there is something encouraging, at least about the blood supply. Can we be reasonably certain that that is being tested?

Dr. MASON. In the United States of America, blood bank rules require that anyone donating blood be asked specifically whether they are or have been an IV drug abuser, a homosexual male, a bisexual male, a hemophiliac, or a sexual partner of any of those individuals. These exclusions through questioning reduce the number of infected units that are made available. These procedures were instituted in about 1983. Then, as soon as an HIV antibody test was licensed in 1985, every unit of blood throughout the Nation began to be tested to determine whether antibodies against the AIDS virus were present in that blood. Wherever a positive unit is identified, that blood is not used for transfusion purposes. And if that donor comes back to the blood bank, they will not take his donation again.

Senator HELMS. Well, if he has the virus but, is it possible to have the virus and not have the antibodies?

Dr. MASON. It is possible to have the virus and not have an antibody, during a period of the first 6 to 12 weeks between when the individual is first infected and when antibodies occur in the blood at a detectable level. So, there is that window, and that is why we must continue to question people who come to the blood bank about high-risk behavior, and encourage them not to come in to

donate blood at all. That is one level of exclusion, and testing is the other.

Senator HELMS. Well, suppose they lie, and they are coming down to get the \$35 or whatever it is? Then we have got an infected supply, have we not?

Dr. MASON. We calculate—and this is an estimate—that somewhere in the range of four to five positive units per million slip through the system because people come in during that window when they are infected and not yet antibody positive.

That is a risk, but it is a very low risk, and much lower than it was before testing or questioning was done.

Senator HELMS. So, the degree of Russian roulette has declined a little bit. Or the odds have improved.

Dr. MASON. That is right.

Senator HELMS. Could I ask you, if a person has the virus and does not have the antibodies, does he show up positive on the test?

Dr. FAUCI. It depends on the test. If the person has the virus but does not have antibodies, the initial screening test will be negative.

There are other tests that are not routinely done. One is a test for a circulating component of the virus called the "antigen test." And another test is to culture the virus from the blood of an individual.

If you do enough sophisticated tests, you can determine if somebody is carrying the virus, even though their antibody test is negative. But these are not routinely done.

Senator HELMS. One final question for this panel, Mr. Chairman. I hear a lot of folks say, "Well, there is a difference between the United States and Africa."

Well, there is, in terms of percentages and in terms of numbers. But in terms of the origin and spread of AIDS, the facts are the same. Are they not? Virtually?

One of you was talking about various many sexual partners, sodomites —

Dr. MASON. The routes of transmission are identical worldwide. In the United States, the ratio of cases in men to cases in women is about 13 to 1. But if you subtract out all of the cases in homosexual and bisexual men, and the cases in male hemophiliacs, you rapidly get down to a ratio of 3 to 1 or 2 to 1. and in some communities, we are running close to 1 to 1. This is largely in IV drug abuse communities; men still tend to predominate in the United States as IV drug abusers.

But in terms of heterosexual transmission, we really are talking about the sexual-partner of the IV drug abuser, and although that is heterosexual transmission, the route of the problem is IV drug abuse.

Most of our heterosexual cases in the United States up to this point are the sexual partners of bisexual men and male and female IV drug abusers.

Senator HELMS. Well, this may be an unfair question. You may not want to answer it.

But what percentage of the AIDS cases cannot be traced back to the conduct that you are talking about? Homosexuality? Now, I am counting, say, tainted blood coming from a homosexual with AIDS or whatever.

Dr. MASON. I cannot put a finger specifically on homosexuals.

About 48,000 AIDS cases have been reported to date. We believe we only get about 80 percent reporting. Ten percent of the cases probably are never diagnosed in the first place. Ten percent slip between the cracks, and the State or the physician or someone does not report it.

Of those cases that are reported, we classify 3 to 4 percent as undetermined. What that means generally is that we have not yet done an epidemiologic investigation on that individual. Often, for example, the individual has died before the case was reported, so we cannot go back and determine whether he was a homosexual or bisexual male or an IV drug abuser. The fact that the cause is undetermined does not lead us to believe that there are any secret ways that this disease is being transmitted. It simply means that either the case is under investigation, and therefore is listed as undetermined, or there is no way to go back and find out the cause. The proportion of undetermined cases has remained stable during the last 4 or 5 years. I suspect that this number will increase as more and more cases are reported, because with a larger number of cases reported, there is less ability at the local level to go back and do a careful investigation of what risk factors were there.

Senator HELMS. Do you agree with that?

Dr. ALLRED. Yes. I would just add one thing to what Dr. Mason said.

The predominance of the heterosexual transmissions to date have been in the sexual partners of IV drug users, as is clearly not the case in central Africa, where it, HIV transmission, is a venereal disease, with a 1-to-1 ratio between men having it and women having it.

The concern that some of us out in the community have is that we may be starting on to that same curve, that it is being introduced into the heterosexual population. And once in the heterosexual population, it will spread initially very slowly, but spread it will.

Heterosexuals have fewer sexual partners than homosexuals do. They have fewer sexual encounters. They do not engage in frequent high-risk behavior. So, I would not expect to see a spread in the heterosexual population as rapidly as we have seen in the homosexuals.

But I think it is far too early to say that we are not going to have a significant heterosexual transmission of the HIV virus in this country. With the long latency period, it could be well into the next decade before we can say authoritatively at all that there has not been significant transmission of the virus through the heterosexual population.

Senator HELMS. Thank you, gentlemen. Thank you, Mr. Chairman.

Chairman PELL. Thank you very much, gentlemen.

Senator HELMS. It was excellent testimony. All three.

Chairman PELL. The next panel, we will combine two and three, I think.

The next panel will be Dr. Ronald St. John, Program Coordinator of the Health Situation and Trend Assessment, PAHOL/WHO, Dr. Jarrett Clinton, Deputy Assistant Secretary of Defense for Profes-

sional Affairs and Quality Assurance, Department of Defense, and Mr. Bradshaw Langmaid, Jr., Deputy Assistant Administrator, Bureau for Science and Technology of the Agency for International Development.

I appreciate very much all of you being here. You understand, I believe, that your testimony should be limited to 10 minutes, giving us time for questions afterward. I think it would be appropriate if Dr. St. John, the Program coordinator, from an international viewpoint, should lead off. Dr. St. John.

**STATEMENT OF DR. RONALD ST. JOHN, PROGRAM COORDINATOR,
HEALTH SITUATION AND TREND ASSESSMENT, WORLD
HEALTH ORGANIZATION**

Dr. St. JOHN. Thank you very much, Senator Pell. On behalf of the director general of the World Health Organization, Dr. Hafdan Mahler, and the director of the Pan American Health Organization, Dr. Carlyle Guerra de Macedo, I want to thank you very much for this opportunity to present testimony before this special and important committee.

The epidemic infection with the human immunodeficiency virus is now global in scope. Both industrialized and developing countries are affected. The numbers of reported cases of AIDS in countries reporting AIDS have continued to increase dramatically.

As of November 11, 1987, 64,488 cases of AIDS have been officially reported to the World Health Organization from 127 countries. However, this number represents only a fraction of the estimated 100,000 to 150,000 cases of AIDS which have occurred to date.

WHO estimates that between 5 and 10 million persons may be currently infected with human immunodeficiency virus. And excluding the United States and Canada, we estimate that at least 500,000 people are infected in Latin America and the Caribbean.

By 1991, WHO estimates that at least 1 million new cases of AIDS could develop in people already infected with HIV virus. This epidemic is an unprecedented threat to global health. This epidemic is just beginning.

This epidemic will require all people of all countries to mobilize national and international energies, resources, creativity, and commitment. A review, a very rapid review of the worldwide situation is important, so that the Global Special Program on AIDS can be placed in perspective.

AIDS has been reported now from every part of the world. The largest number of cases, 48,000, as of today, have been reported in the United States, where the disease was first recognized in 1981.

In 40 other countries in the Americas, a total of 6,259 cases have been reported to the Pan American Health Organization. In Europe, where 27 countries have reported over 7,500, most countries are now considered to be facing an epidemic.

WHO estimates that 500,000 to 1 million persons in Europe are infected today with the AIDS virus. We estimate that there will be 25,000 new cases of AIDS in Europe by the end of 1988.

In Africa, the number of countries reporting AIDS to WHO has increased substantially in the past year. As of November 11, 37 African nations have reported 6,298 cases of AIDS. Due to underre-

porting and underdiagnosis, the true number may be 10 times this many.

In Asia, 18 countries have reported 208 cases of AIDS. Many of those cases are linked to persons who have been in areas where AIDS is more prevalent. Oceania, including Australia and New Zealand, has reported 678 cases.

Now to date, the world has tracked the course of this epidemic by monitoring the total number of accumulated cases since 1981, the start of the epidemic.

The total number of cases accumulated is used in many circles to make comparisons between countries, and undue attention is attracted by those countries reporting a large number of cases, for example, the United States, Brazil, France, Haiti.

The comparisons are misleading because they do not consider the size of the populations which give rise to the AIDS cases. A calculation of the ratio of reported cases for a given calendar year to the midyear population estimate for that year provides a better method for comparison.

Our data reveal that the Caribbean subregion, for example, is second only to the North American region in severity of disease. Yet even these averages obscure significant differences between countries.

Several specific Caribbean countries are contributing a disproportionate number of cases for their population sizes. There is severe underreporting due to the failure to detect cases and problems meeting the fairly strict case definition criteria established by CDC and adopted by WHO, and which has been revised three times in 4 years.

There is also some confusion of cases of AIDS with persons infected by the AIDS virus. In the Americas, the actual number of AIDS cases may be two to four times the reported number.

How far has the virus penetrated the general population? The answer is unknown. Prevalence studies throughout the world are incomplete and somewhat fragmented. Nevertheless, scattered evidence indicates that the problem may be severe in some countries.

In Africa in some areas 5 to 10 percent of pregnant women have been reported as HIV positive. In some selected African populations the seroprevalence rate may be as high as 35 to 40 percent. In high-risk populations such as prostitutes the rate is much higher.

The disease is more concentrated in African urban areas and less frequent in rural populations. In the Americas in Haiti approximately 50 percent of the prostitutes are now infected.

In the Dominican Republic, 1.5 to 2 percent of all blood donors are infected. In Mexico, in paid blood donors recruited in some private blood banks, the prevalence of infection reached nearly 50 percent, and Mexico took the courageous step of closing all private blood banks.

In certain countries of the Americas, Europe, and Australia, most AIDS cases occur among the young, 20- to 49-year-old homosexual or bisexual men and intravenous drug abusers.

However, in such countries as Haiti, the Dominican Republic, Guatemala, Honduras, and many Caribbean islands, heterosexual transmission is becoming more common as measured by male to

female ratios, which are less than 6 to 1. That is intermediate between the African and the North American ratio.

Despite considerable research, a vaccine may be further away than was thought a year ago. In addition, a cure for AIDS is still lacking. In the absence of a vaccine or effective cure or treatment, education and information on how to avoid AIDS remains the key to controlling spread.

This disease may seriously impact upon the gains already achieved throughout the world in general health status. For example, poverty-related diseases may well increase and threaten to intensify the impact of AIDS in developing countries.

Because persons infected with both HIV and tuberculosis are more likely to develop active tuberculosis, the gains made by tuberculosis control programs may be quickly lost. In some countries which are heavily affected by AIDS, gains made in the reduction of infant mortality may soon be lost, because of the spread of AIDS from mothers to newborns.

Furthermore, the disease itself threatens to aggravate poverty, since it primarily kills men and women between the ages of 20 and 49. These persons are the responsible economic producers who provide for both younger and older generations and contribute to the economic and social development of their communities.

Their illness and death means loss of productivity, human capital, and support for children and the elderly. Their care will deplete already scarce resources for both their families and health care systems.

Further development of Third World countries may be limited by the fear that international travel will expose people to AIDS or contribute to its spread. Foreign workers must prove that they are not infected in order to gain entry to some countries to work on development projects.

Foreign students have been required to undergo tests for HIV infection in selected countries. The United States now requires all permanent immigrants and persons applying for residency status to be tested and be found negative for the AIDS virus.

International business may be hurt by AIDS fears as skilled workers and business men and women from developed countries refuse to travel to developing countries for fear that they may be transfused with infected blood when they sustain an industrial or other accident.

Such situations may have serious negative impact on many developing country economies. Finally, a growing list of national restrictions may seriously inhibit international movement and commerce.

One year ago in November 1986, the Special Program on AIDS had still to be created. Today, having received strong support from both within and outside of the United Nations system, the Special Program on AIDS is actively coordinating and directing the global fight against this disease.

Since February 1, 1987, a great deal has been accomplished. The global dimensions of AIDS are now recognized. And the global AIDS plan has been designed.

The funding to begin its implementation has been provided, and the support of all countries has been marshaled behind WHO as

the directing and coordinating agency in this global fight against AIDS.

The work of the Special Program on AIDS is outlined in the first and second progress reports which I attach to this testimony.

Support to national AIDS programs has received the highest priority, and has been carried out in 93 countries, with 34 more scheduled by the end of this year.

In concert with the Special Program on AIDS, 58 countries have completed short, 6- to 12-month plans, and 25 countries have completed medium-term, 3- to 5-year plans. National AIDS committees have been established in over 151 countries.

The goals of the WHO Special Program are to prevent AIDS virus transmission, care for AIDS virus-infected people and unify national and international efforts against AIDS.

Global activities have included establishing criteria for screening for HIV, advice on international travel, safety of blood and blood products, and guidelines for AIDS prevention and control.

To date the Special Program on AIDS has made \$18.9 million available for national program support in 1987. The 1987 budget for all activities is \$25 million, which has been provided by development aid authorities from 10 nations in Europe and North America.

The regional offices of WHO are fully participating components of the Special Program on AIDS. For example, the Pan American Health Organization, as the regional office for the Americas, executes the Special Program on AIDS in the Americas.

The AIDS problem has been approached in a manner which will permit the accomplishment of as much as possible as quickly as possible.

Certain protocols and certain bureaucratic procedures have been bypassed or eliminated. Given the urgency of the HIV pandemic, WHO believes that it cannot follow traditional business as usual approaches. The future depends on what is done today.

WHO has made a commitment to its member countries, which in turn must commit themselves to this unprecedented epidemic. Thank you.

[The prepared statement of Dr. Ronald St. John may be found in the appendix.]

Chairman PELL. Thank you very much, Dr. St. John. Dr. Clinton.

STATEMENT OF DR. J. JARRETT CLINTON, DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR PROFESSIONAL AFFAIRS AND QUALITY ASSURANCE

Dr. CLINTON. Mr. Chairman, Mr. Helms. About 2 years ago we began testing all applicants to the military services for the HIV antibody.

We have now tested more than 1 million applicants, and have found a remarkably stable rate of HIV antibody positivity of 1.5 per 1,000 individuals tested, or 0.15 percent.

The specific rates reflect the geographic and demographic distributions of AIDS in the United States. Black rates and Hispanic rates are greater than white rates. Metropolitan rates are far greater than rural rates. Male rates are greater than female rates.

Counties around New York, Newark, Washington, DC, and San Francisco have rates that approach 1 to 2 percent of all the military service applicants from those counties.

These data are routinely provided to the Public Health Service's Center for Disease Control for analysis and publication in the morbidity and mortality weekly report. States receive the aggregate State data routinely and can request further detailed data.

The Centers for Disease Control is not given the specific names of those determined to be HIV antibody positive. But if a State requires reporting of HIV positivity, DOD readily cooperates.

Those individuals who are HIV positive are disallowed from joining the military. They are counseled briefly regarding the importance of this finding, and are encouraged and assisted in seeking local assistance for their medical and counseling needs.

Because these people are not beneficiaries of the military, our capacities to provide extensive assistance to them are greatly limited.

We have made extensive efforts to advise local health departments of our need to have a complete list of available community resources so that these HIV positive military recruit applicants can obtain all the assistance that may be available to them.

We initiated the policy of testing all active duty military personnel in 1986, and have nearly completed that task. The actual testing is accompanied by an information and education program about testing and its implications.

Those individuals testing HIV positive by Western blot are provided an extensive counseling process and a complete medical evaluation in one of the service's medical centers in the United States.

Results to date indicate that the average rate of HIV positivity among active duty service members is 1.6 per 1,000 individuals tested. For an active duty force of just over 2 million, this translates to approximately 4,000 who are HIV positive.

For the great majority, the medical evaluation indicates that they only have HIV antibody positivity. They have no other pathology. And as long as they are fit for duty, they can do their job, they remain in the service if they so choose.

These individuals are reevaluated on at least an annual basis, and are assigned only within the United States, not outside the United States.

Retesting of the active duty personnel is underway, contrary to the earlier statement by the reserve officer. The Army plans retesting every 2 years. The Navy is planning retesting every year. And the Air Force has similar plans.

Retesting has begun, and we have preliminary data. The rationale for testing both the applicants for the military and the active duty members is based on health issues. These individuals are subjected to extensive immunizations and unusual disease threats.

Furthermore, in some extreme contingencies, we may need to rely on budding blood donors without the laboratory capacities of testing each unit of blood for the presence of HIV antibody.

For the civilian dependents of active duty service members or retirees or dependents or retirees who have access to our military system, we are offering extensive and accessible voluntary testing coupled with the opportunity to discuss possible risk and protective measures.

Voluntary testing is emphasized particularly in sexually transmitted disease clinics, prenatal clinics, and alcohol treatment programs. In the absence of a medical rationale for mandatory testing, all testing of civilians is with voluntary informed consent.

We continue to review the appropriateness of mandatory testing for specified groups of civilians working outside the United States, working in conditions that may be comparable to the active duty in that particular job in that particular country.

Our efforts to fully inform, educate, and motivate DOD beneficiaries about this disease and its threat are extensive. We have relied heavily upon materials already developed by the Public Health Service and the American Red Cross.

The Surgeon General's report developed by Dr. Koop has had wide distribution in the millions. We have modified private sector written brochures for the military audience and will distribute another modified brochure this year.

Each service has developed audiovisual materials and many military installations have created or adapted materials and programs specifically for their needs.

There are limitations on medical confidentiality within the military. Nonetheless, our programs to date have operated without major violations of privacy.

The Congress provided further statutory language that provided full protection for the information gained in an epidemiological interview between the individual and the health care worker.

That information cannot be held against the individual, though other information obtained from other sources may be used against the individual. Information about HIV antibody positivity may result in changes of assignment.

But HIV positivity alone or with information solely from the medical interview about illegal drug use or homosexuality cannot result in a discharge.

Information about case contacts is provided to our DOD health authorities, if the contact is a DOD beneficiary. If the case contact is not a DOD beneficiary, the information is provided to State or local health authorities, unless that jurisdiction prohibits the flow of this information. And some jurisdictions do.

In all jurisdictions, we are making every effort to cooperate fully with the rules and regulations and requirements of that jurisdiction.

DOD now has a modest research program that builds on our capacities to follow HIV antibody positive individuals and study the progression, if any, of their infection. Further, we build on our institutional capacities for vaccine development to contribute to that arena.

Other research efforts focus on newer diagnostic measures, which provide faster or more reliable measures of HIV infection. These research efforts are coordinated extensively with NIH and with CDC.

In summary, Mr. Chairman, we have concentrated attention on HIV infections rather than AIDS alone by screening of applicants and active duty members. This information should help the individual, the military community, and the Nation's understanding of this infection.

We have implemented a mass screening program, coupled with counseling, in an appropriate manner, with excellent quality control and consistent results. Retesting is underway.

We have enjoyed a remarkably collaborative relationship with all agencies of the Public Health Service, the Veterans Administration, and the State Department. We serve on all Federal interagency committees, and have incorporated their expertise into our committees and deliberations.

Finally, I note that our policies and programs are under constant review. We have committed ourselves to an annual rereview of all policies and are committed further to changing current policies and programs, our rules or regulations, in response to any new scientifically valid information.

I would be pleased to answer any questions or comments.

[The prepared statement of Dr. J. Jarrett Clinton may be found in the appendix.]

Chairman PELL. Thank you very much. Mr. Langmaid?

Senator HELMS. Mr. Chairman, I assume that the gentleman in the preceding panel, all of them have cut down their prepared speeches.

And I would suggest that they be assured, a lot of information, I have been following with your text, and all this testimony is excellent. And I am going to ask that it be printed as well so we can distribute it.

Chairman PELL. The full text will be printed in the record as if read. Mr. Langmaid.

STATEMENT OF BRADSHAW LANGMAID, JR., DEPUTY ASSISTANT ADMINISTRATOR, BUREAU FOR SCIENCE AND TECHNOLOGY, AGENCY FOR INTERNATIONAL DEVELOPMENT

Mr. LANGMAID. Thank you, Mr. Chairman. If I may, I would like to also introduce Dr. Jeffrey Harris sitting behind me, who is my agency's AIDS coordinator.

As Senator Helms said, as the full text will be printed, let me briefly summarize the major elements of AID's AIDS policy.

First and foremost, we enthusiastically and vigorously support the leadership which WHO has given on the AIDS problem. The WHO Special Program on AIDS was established in January 1987, and in the brief time since then it has initiated collaboration with and made initial assessments in 93 different countries.

Fifty-eight short-term plans have been developed, 26 medium-term plans have been developed, and it is my understanding that by the end of next year, they hope to have medium-term plans in place with all 126 countries.

The United States has provided financial support, personnel resources, and diplomatic leadership to this WHO program. Our collaboration and coordination with WHO in this area is close and continuing.

Second, we are determined to ensure that our existing programs in the health and population area do not themselves contribute to the spread of the virus, and are protected from the infection.

The most obvious example of this is in the child survival area, where the spread of the disease through childhood immunizations is at least theoretically possible.

Working with UNICEF, we are ensuring that there are adequate sterilization procedures for these immunization activities. I am pleased to be able to report that we know of no case in which HIV infection has been spread by this program.

Third, in looking at how we can best contribute, we thought it most important to play to our own institutional strengths in training and technical assistance. In the health and population areas, we believe we have particular strengths in service delivery. Pioneering work has been done in operations research, social mobilization, and public education. We intend to rely on these strengths in the development of AIDS programs.

Fourth, at the same time we recognize that there are some areas of the problem that are beyond our capabilities, or which are much more the responsibility of others. Others on the panel already have touched on these areas.

For example, we do not intend to be involved in curative care. Nor are we planning any investments in basic research for a vaccine or a cure. Other agencies of our Government and the private sector are far better equipped, organized, and funded to address these critical problems.

However, we do plan to work closely with other agencies, and of course in particular the Department of Health and Human Services, as well as the private sector, to stay informed on the development in their areas of responsibility so as to ensure that the benefits of their efforts are made available to the developing world as rapidly as possible.

To carry out this program, the Agency for International Development obligated \$2 million in fiscal year 1986 for WHO, which I believe was the first dollar contribution to the WHO Special Program on AIDS.

In fiscal year 1987 we have obligated \$16.9 million, including additional funds for WHO, as well as initiated a number of bilateral activities.

Mr. Chairman, I would be glad to answer any questions you might have.

[The prepared statement of Bradshaw Langmaid, Jr. may be found in the appendix.]

Chairman PELL. Thank you very much indeed, gentlemen. I would like to ask Dr. St. John what his views are as to what we can do as a nation to control or enhance international efforts to control AIDS? What would be your recommendation?

Dr. ST. JOHN. Mr. Chairman, I would like to comment by really commending the United States for assuming a great deal of leadership in the international arena, to compliment U.S. AID for its rapid, enthusiastic support of the Special Program on AIDS.

That support has continued and has been unwavering. And I think that the best thing that can happen is the continuation of this kind of support for the Special Global Program on AIDS.

Chairman PELL. In collecting data on the prevalence of AIDS, I notice that you have a very spotty collection system now.

In some countries you apparently can get most of them, in others you cannot. Is there any way of bringing the rest of the world up to snuff in reporting the cases?

Dr. ST. JOHN. We are making major efforts in that direction, Senator, to try to improve data collection. One of the major key components of a national program for AIDS is an improved surveillance component.

It requires establishing the necessary laboratory capability in the country, national reference labs, peripheral labs, laboratory networks to get the appropriate testing in place, and then the actual systems for counting the cases and counting infections.

We are working very hard to try to help countries, every time there is a national plan, to make sure that component is included.

Chairman PELL. Thank you very much. Dr. Clinton, how often would the troops have to be tested to make sure that AIDS is not spreading amongst them?

Once a year, once every 2 years, once every 4 years?

Dr. CLINTON. I think no one has the perfect answer to that. As much as anything, because there are 2 million people out there to be tested, and each test costs us about \$5 in a contract laboratory.

But let us say there is a \$5 associated charge, which is the personnel involved in handling that specimen, that is already \$20 million. The newspapers suggested there were going to be a lot of cuts at DOD, so no one is eager to take on any additional requirements except those that are absolutely necessary.

The Navy believes that it can, with its own resources, move toward testing all of the active duty Navy again in the next year.

The Army is doing a good deal of testing within its hospital system and clinic systems. The Army wants to test all the active duty in the next 2 years.

And I think generally, since these things do not occur overnight, as we gather accumulating evidence, we will find areas where the new case rates are higher than in others, and we can focus attention there.

So, my guess is we will come out with something that is in the order of everyone being tested every year or 2, until we have a better sense of whether our prevention efforts have been successful and whether the behavior changes of the individual means that we can relax the retesting.

Chairman PELL. How often does the Coast Guard test?

Dr. CLINTON. The Coast Guard is not under the authority of the Department of Defense, so I cannot answer that. I will give you what information I might have.

I think the Coast Guard certainly was testing all of its folks. I am not sure that it has instituted retesting on a specific basis yet. There are fairly small numbers, so the Coast Guard may be able to accomplish that.

Chairman PELL. Thank you very much. Senator Helms.

Senator HELMS. Mr. Chairman, I do not know about you, but I expect you agree with me that this testimony here this afternoon has been very helpful.

I was just reading from Dr. St. John's text here, and I wish that we could print this indelibly on the minds of everybody in this

country. You said, in country after country the epidemic curve is beginning to resemble the curve for the United States.

That is very interesting in the light of the attitude in this country, I have heard it many times, well Africa is something separate and different. But Africa is not separate and different. The similarities, it is not even similar it is identical.

Then you say, further spread of this disease is certain. Infection is for life. In addition, transmission involving blood and blood products further guarantees that nearly all segments of society may experience some risk of exposure during their lifetimes.

So, if we could sit back here and think, you know, we can look at all this with impunity. But it is not so, is it?

Dr. ST. JOHN. No, sir.

Senator HELMS. I wanted to ask Dr. Clinton, if I may, did I understand you to say that the Navy has finished the first round?

Dr. CLINTON. Correct.

Senator HELMS. Are you sure about that?

Dr. CLINTON. Well, I do not doubt that there is some sailor someplace that has not been tested yet. But in discussions with the Surgeon General and with the staff involved with it, they believe they are nearly complete.

When the numbers are as large as they are in the military, it is always difficult for us to say that the very last person has indeed been contacted.

But I am confident that both the Army and the Navy are virtually complete in the testing of the active duty force. And the Air Force is in the order of 80 percent complete. We have those rates. We know what they are. We know where the hot spots are, where the low spots are.

Senator HELMS. Well, that is encouraging.

Chairman PELL. Officers are included, are they not?

Dr. CLINTON. Yes. Every active duty member, unlisted and officers.

Senator HELMS. And I heard the words, I think, the acoustics in this room are terrible and it is difficult to hear up here. You did say, I think I am quoting you correctly, retesting is on the way?

Dr. CLINTON. Yes, that is correct. Retesting has begun and there are plans to make that more specific.

Obviously we did not talk about retesting until we did the testing in the first instance. I should add that testing of the Reserve Forces is also underway.

Senator HELMS. Now, I understand that there is an overall steady and relatively low rate of HIV positive service members who have been tested at this date.

Dr. CLINTON. Overall, the rate is low. It is about 0.16 percent.

Senator HELMS. Have not?

Dr. CLINTON. That are HIV positive. So that is a fraction of 1 percent.

Senator HELMS. How many service members who have already tested negative, or how are they treated when returning from a country such as East Berlin or other countries? Are they retested? If so, what is the rate of positivity?

Dr. CLINTON. I know of no plan to test regularly someone coming back from either Asia or Europe simply because they were there.

But they will be caught up in the retesting in general, and will be retested if they show up particularly at sexually transmitted disease clinics, or in the case of women, in prenatal clinics, or in the case of alcohol and drug clinics, where we think high-risk behavior with regard to getting the disease will be more manifest, with other concomitant activity.

We are concerned about pregnant women, we are concerned about people who show up with VD, and therefore are starting the retesting process immediately there. And have been for some time. But will regularly do it beyond that also.

Senator HELMS. Well, at a minimum, just the overall retesting question, that would ensure a safer blood supply, of course. Would it not?

Dr. CLINTON. Yes.

Senator HELMS. What are the potential effects on our basing rights in countries with widespread occurrences of AIDS? For example, Africa ports of call, or the vicinities of some European Army bases?

Dr. CLINTON. What is the effect on us?

Senator HELMS. What are the potential effects on our basing rights in those countries with widespread occurrences of AIDS?

Dr. CLINTON. Well, in the first instance, we would have no active duty personnel on that ship that ports in that city or no active duty soldier or airman in that country, outside the United States.

All people who are HIV positive cannot deploy outside the United States. Therefore, the numbers are small. And anyone who is HIV positive, who therefore could develop AIDS or transmit the infection, is not allowed to leave the United States.

Senator HELMS. Well, what are the findings at bases such as Subic Bay and Clark Air Force Base in the Philippines?

Dr. CLINTON. The findings with regard to active duty personnel? There should be no one there who has HIV positivity or AIDS.

Now, indeed, if we went back far enough, there may be an instance, and I know of instances where that was not the case. Your question is, Do we contribute to the HIV problem in the Philippines?

I am sure that we probably did. I am sure we are not alone. The military are not the only Americans outside the United States. But we have taken the steps to prevent any active duty personnel from going outside this country.

Senator HELMS. OK. Now, you know what I am interested in. I do not want there to be a lot of excitement, and we lose our basing rights. You know of no apprehension there, then?

Dr. CLINTON. Nothing that is of great significance. I think it is only a small part of the equation. We did not want it to become a problem, and that is why we took that action.

Senator HELMS. Well, let me move around the world here a little bit. Do you happen to have any estimate of the percentage of the Zimbabwean army infected with the AIDS virus?

Dr. CLINTON. No, I do not.

Senator HELMS. Would the Defense Department have it anywhere?

Dr. CLINTON. I assume the Defense intelligence community might be able to give us some information on that.

Senator HELMS. That would not be classified, would it?

Dr. CLINTON. I am sure it is classified.

Senator HELMS. You are sure it is?

Dr. CLINTON. If it existed, I am sure it would be. But I do not know that it exists.

Senator HELMS. I wonder if I could ask you to do me a favor, if you will, of checking on that, and maybe reporting to the chairman so we will know the answer to that.

Dr. CLINTON. We will have the intelligence community prepare a response to that, as if it were a question. You are asking for the military of Zimbabwe?

Senator HELMS. Yes, sir. The Zimbabwean army.

Mr. Langmaid, just in a general sense, what sort of demands do you think AIDS will be placing on the Federal budget for assistance in programs for treatment in African countries for the next 10 years?

Have you done any study of that? Have you got any off-the-top-of-your-head notion?

Mr. LANGMAID. No, I really have not, Mr. Chairman. I think we see ourselves continuing to play a role in the WHO program.

WHO anticipates funding needs for the program rising from \$25 million this year to \$66 million next year to maybe \$150 million the year after. I do not think even they have projected the requirements, definitively, further into the future.

Frankly, most of the things that need to be done, after one has dealt with the issue of blood screening, are local costs of a government where they use their public radio, television stations, or communications media. These are not heavy foreign assistance kinds of investments.

They may need technical assistance, training, and advice. But we are not talking about hardware investments. So, we do not see the numbers escalating rapidly in that respect.

Senator HELMS. Well, we had some discussion on the floor last week, I guess it was, about the cost of a test. The Defense Department does it for about \$5. Is that it?

Dr. CLINTON. Correct.

Senator HELMS. And the Veterans Administration said it costs them about \$18. But presumably they use the same laboratories. Do they not?

Dr. CLINTON. I would think so.

Senator HELMS. But in any case, I am not known as the biggest spender in the Congress. But I think whatever we can do to protect people from this, we need to do.

I just want to return, Mr. Chairman, then I am going to hush because the yellow light is on.

Mr. LANGMAID. Senator, could I add a comment on the issue of testing? We have tried to do a rough estimate of what it would cost to test all blood transfusions. The cost for developing countries worldwide is about on the order of \$32 million a year, depending on how you estimate the number of transfusions and the cost per test.

Senator HELMS. Well, I would not object to spending that money. Would you?

Mr. LANGMAID. No.

Senator HELMS. Because you might get the next transfusion that is tainted.

I think we have gathered here that as much as some in this country may want to kid themselves about the nature of this disease, we cannot isolate Africa or any other part of the world and say they are different from us.

The same cause of AIDS, as I understand it, correct me if I am wrong, is pretty much on the same curve everywhere, and it is getting pretty close to identical, I believe you said. So, it gets back to this question of personal conduct, and if you will allow me to use the word "morality."

This multiple partner business, as you said, further spread of this disease is certain, infection is for life. And maybe everybody better pull in their reins a little bit and say, "whoa here," and examine their own priorities and their own conduct.

Mr. Chairman, I cannot tell you how much I appreciate your scheduling this hearing. It has been very helpful to me. Would it be all right, gentlemen, if we filed some written questions with you?

I know you have got more to do than you can get done. But there are some questions I did not get to that I would like for each of you to answer. If you would do that when it is convenient, I sure would appreciate it.

Chairman PELL. Did you want to say something, Dr. St. John?

Dr. ST. JOHN. Yes. If I might add a comment to the first question that you asked me about the U.S. role, and I will be very brief.

But it has to do a little bit with the fact that the Special Program on AIDS is, after all, a WHO program, one of many. Albeit a very important one. But the Special Program on AIDS depends heavily on the WHO organizational structure.

And while the U.S. support for the AIDS program has been unwavering, U.S. support for the organization as a whole has, I would say, wavered a bit in these last few years.

I cannot help but mention at this time our appreciation for the decision by members of this committee yesterday in conference with members of the House Foreign Affairs Committee to authorize full funding for WHO and PAHO in fiscal year 1988.

I really hope that this can be translated into an appropriation which will enable the United States to pay its full assessed contribution. This contribution is vital to sustain WHO's and PAHO's efforts to control the spread of AIDS.

Chairman PELL. Thank you.

Senator HELMS. With the increasing number of cases, this is my last question, do you foresee the need potentially to do in the case of AIDS what we are doing automatically with typhoid fever and so forth?

People throw up their hands in horror when you talk about quarantining. But do you think there will ever be a time when we really ought to consider that?

Dr. ST. JOHN. I hope not, Senator Helms. I think that the disadvantages will probably outweigh the advantages in terms of the cost and the difficulties in actually carrying out quarantine in a modern world where today we can sit in Washington and in a few

hours we can sit in Europe or Latin America or in a slightly longer time in the Far East.

I think quarantine, as a public health measure, has many serious limitations in preventing the spread of a sexually transmitted disease.

Chairman PELL. Thank you very much. We will also ask that the record be kept open for any questions to come from this side of the aisle or any statements that any of our colleagues may care to make.

It has been a very useful hearing. As I said earlier, the impetus for it was given to us by the ranking minority member, Senator Helms. And I think it has been a good hearing. The hearing is adjourned.

[Whereupon, at 4:20 p.m., the hearing was adjourned, subject to the call of the Chair.]

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APPENDIX

United States Senate

COMMITTEE ON FOREIGN RELATIONS

WASHINGTON, DC 20510

July 1, 1987

Mr Joseph E. Ross
 Director, Congressional Research Service
 101 Independence Avenue, S.E.
 Washington, D.C. 20540

Dear Mr. Ross:

Please provide to me not later than July 15, 1987, a report which analyzes the effects of the HIV plague on world population and demographics.

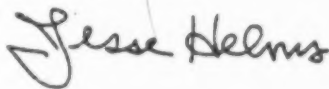
Specifically, please take the current known cases of AIDS by country and estimate using Center for Disease Control methodology the number of infected individuals in each such countries. Thereafter, please project the expected level of infection in 1995 and year 2000 for each such country using that data. Analyze death rates against birth rates by country to determine population growth or loss and provide an estimate on population figures by country for the years 1995 and 2000. Finally, please describe the demographic and ethnic changes in world population which could be attributed to the effects of HIV infection on mortality rates.

Although it may be at this stage difficult to predict, I also ask that you provide a prediction of HIV plague effects on immigration and emigration during the periods covered.

I consider this work to be of the utmost importance, I am personally interested in it, and I trust my request will be acted on as expeditiously as possible.

With very best regards, I am,

Sincerely,



JESSE HELMS

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United States Senate

COMMITTEE ON FOREIGN RELATIONS

WASHINGTON, DC 20510

GARYL S. CHRISTIANSON, STAFF DIRECTOR
 JAMES P. LUCIA, MANDATORY STAFF DIRECTOR

July 28, 1987

The Honorable William Webster
 Director
 Central Intelligence Agency
 Washington, D.C. 20505

Dear Judge Webster:

As Ranking Member of the Committee on Foreign Relations, I urgently request the classified report which the CIA has compiled on the international effects of the AIDS epidemic. I understand that the world wide effects of this plague are reaching catastrophic proportions in Africa, Latin America, the Caribbean, and will, in the near future, reach similar levels of infection in the United States and Western Europe. The implications for our security, military, and financial assistance, not to mention our defense posture abroad, are staggering.

I am convinced that the analysis contained in this report would be of immense benefit to our national security. My staff member on the Committee with a final TOP SECRET/SCI clearance, Dave Sullivan, is the point of contact.

I appreciate your assistance in releasing this document which will help begin the process of establishing an effective policy to combat this disease.

With very best regards, I am,

Sincerely,

JESSE HELMS: nc



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United States Senate

COMMITTEE ON FOREIGN RELATIONS

WASHINGTON DC 20510

GERYLL B. CHRISTIANSON STAFF DIRECTOR
 JAMES P. LUCIER HONORARY STAFF DIRECTOR

July 23, 1987

The Honorable Caspar W. Weinberger
 The Secretary of Defense
 The Pentagon
 Washington, D.C. 20310

Dear Cap:

It was brought to my attention today that you stated in your forward to Soviet Military Power - 1987, as follows:

"The USSR's research facility continue to exploit new biological warfare technologies. New genetically engineered agents could be so impervious to treatment that only scientists with the knowledge of how the original mutation was developed could produce an effective prevention or cure."

Please assist me in arranging for David Sullivan of the staff of the Senate Committee on Foreign Relations to receive a complete and detailed briefing of all relevant evidence supporting your statement. Mr. Sullivan has a final TOP SECRET/SCI clearance, but, if necessary, I request that he be granted access to any additional compartments that may be required for him to receive a plenary briefing.

Additionally, I ask that the briefing cover whatever evidence, if any, exists that supports the proposition that the HIV viruses have resulted from the intervention of man in altering or affecting genes.

I consider this request for your assistance to be of the highest priority.

With very best regards, I am,

Sincerely,

JESSE HELMS:nc



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United States Senate

COMMITTEE ON FOREIGN RELATIONS

WASHINGTON, DC 20510

July 28, 1987

The Honorable Caspar W. Weinberger
 The Secretary of Defense
 Room 3E880
 The Pentagon
 Washington, D.C. 20301-1000

Dear Cap:

As Ranking Minority Member of the Committee on Foreign Relations, I am attempting to assemble as rapidly as possible all relevant data now available concerning the international relations and national security effects of the global HIV plague.

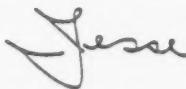
In that connection, I request that the Department of Defense provide on an urgent basis an assessment of the demographic changes in the military services which have and will occur as a result of the HIV screening program in both active and reserve components of the armed services.

Particularly, I would appreciate an analysis of the changes in the personnel composition of the military by sex, region, and race which have already occurred and which can be predicted to occur in the near term (roughly 1995) and beyond (roughly 2000).

I would also like to be advised whether service members who test positive for the HIV virus are permitted to serve as food handlers. Additionally, I would appreciate your best present judgment on whether such individuals pose a risk to other service members in regard to casual contact and insect vectors.

With very best personal regards, I am,

Sincerely,



JESSE HELMS

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United States Senate

COMMITTEE ON FOREIGN RELATIONS

WASHINGTON, DC 20510

July 28, 1987

The Honorable Otis R. Bowen
 Secretary of Health and Human Services
 200 Independence Avenue, SW
 Washington, D.C. 20201

Dear Secretary Bowen:

As Ranking Minority Member of the Senate Committee on Foreign Relations, I request that you provide to the Committee as soon as possible a report containing all data in the possession of the Centers for Disease Control and the Department of Health and Human Services regarding to the following matters:

- the number of individuals with AIDS in each country in the world for which data is available,
- the estimated number of HIV infected individuals in each country,
- a projection of the expected level of infected individuals in the year 1995 and the year 2000 for each such country,
- an analysis of the death rates against the birth rates by country to determine the population growth or loss for the years 1995 and 2000,
- and all data relating to insect-related vectors of the HIV epidemic.

I consider receiving this information as soon as possible to be of extreme importance to the work of the Committee. The point of contact in the Committee for this issue will be Nisi Carlisle.

In the event that any of the foregoing information is classified for national security reasons, I request that the Committee be given a complete explanation of the reason for such classification and that such reason, if any, be transmitted with the relevant classified data to Dave Sullivan of the Committee staff.

With very best regards, I am,

Sincerely,



JESSE HELMS

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United States Senate

COMMITTEE ON FOREIGN RELATIONS

WASHINGTON, DC 20510

July 28, 1987

The Honorable Charles A. Bowsher
 Comptroller General of the United States
 The General Accounting Office
 441 G Street, N.W.
 Washington, D.C. 20548

Dear Mr. Comptroller General:

The Foreign Relations Committee Staff has been discussing with your legislative advisor, Mr. Butch Hinton, a number of projects related to the impact of the AIDS epidemic on international affairs. This letter is to confirm and officially pursue our interest in these matters.

Among these matters are the following:

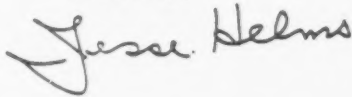
1. A report on the likely effects of AIDS on the single country of Zaire, particularly as it would affect its economic infrastructure, sovereign debt, foreign assistance levels, and ultimately, on its future contribution to or influence on U.S. national security.
2. A further request that the General Accounting Office provide to me not later than August 31, 1987, a report which:
 - analyzes the effects of the HIV plague on world population and demographics,
 - estimates the number of infected individuals in each country (using methodology found to be most accurate in GAO's research),
 - projects the expected level of infected individuals in the year 1995 and 2000 for each such country,
 - analyzes death rates against birth rates by country to determine population growth or loss and provides an estimate on population figures by country for the years 1995 and 2000,
 - describes the demographic and ethnic changes by country in the world population which could be attributed to the effects of HIV infection on mortality rates,

--and provides a prediction of HIV plague effects on immigration and emigration world-wide during the periods covered.

I appreciate the work that Mr. Winton has done so far and ask your kind assistance in quickly expediting these matters.

With very best regards, I am,

Sincerely,

A handwritten signature in dark ink, reading "Jesse Helms". The signature is written in a cursive style, with the first name "Jesse" and the last name "Helms" clearly legible.

JESSE HELMS: nc

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United States Senate

COMMITTEE ON FOREIGN RELATIONS

WASHINGTON, DC 20510-8225

September 21, 1987

The Honorable George Shultz
 Secretary of State
 Washington, D.C. 20520

Dear Mr. Secretary:

It has been brought to my attention that, although the State Department has begun testing its foreign service officers for AIDS, to date the State Department has not yet conducted any comprehensive analysis of potential economic, political, and military effects of the epidemic.

I understand that some embassies have been reporting, in anecdotal form only, the extent to which research and control efforts have been made in host countries. However, I also understand that this limited information has, on the whole, remained classified.

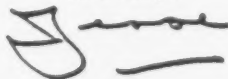
Please inform me as to what, if any, comprehensive form country specific reports on AIDS appear and what steps your Department plans to take in analyzing the potential effects of these findings. I would also like to know what your judgment is of the degree of cooperation our embassies receive from respective host governments and their agencies as well as the international health agencies. Also, please explain why your Department is apparently resisting any significant contribution to the development of an international data base and forecasting model such as the one currently under design by the Bureau of Census Center for International Research.

In that latter regard, I refer particularly to the following statement in a recent report to me that regrettably must remain on a non-attribution basis from an investigative agency of our government:

"State Department officials are aware that AID is interested in developing an AIDS data base and forecasting model, but the Department has not provided any funding for this effort."

As you probably know, these and related issues will soon be before the Committee on Foreign Relations at a planned hearing and your assistance in providing a timely response to this inquiry would be deeply valued.

Sincerely,



JESSE HELMS

CLARONNE PELL, RHODE ISLAND, CHAIRMAN
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United States Senate

COMMITTEE ON FOREIGN RELATIONS

WASHINGTON, DC 20510-6225

December 7, 1987

The Honorable Frank Carlucci
 The Secretary of Defense
 The Pentagon
 Washington, D.C. 20301-1000

Frank:

Dear ~~Mr.~~ Secretary:

As you may know, the Committee on Foreign Relations is conducting hearings beginning Wednesday, Dec. 9, 1987, at 2:30 p.m. on the subject of American national security and foreign policy implications of the global AIDS plague.

Over the past several months, the Defense Intelligence Agency, the Armed Forces Medical Intelligence Center, and the Office of the Deputy Assistant Secretary of Defense for Health Affairs, Department of Defense have conducted briefings and discussions with Committee staff. Unfortunately, much of the relevant information provided is still classified, although in many cases there appears to be no valid justification for such classification especially when juxtaposed to the necessity of the American people understanding the scope and nature of the AIDS threat to our democracy.

Accordingly, I respectfully request that you direct immediate and urgent review of the materials involved for the purpose of declassifying to the maximum extent possible data and facts which ought to be presented to the Committee and to the public in the testimony of Assistant Secretary for Health Affairs, William Mayer, who has been asked to appear as the principal Department of Defense representative.

For example, I believe the American people ought and are entitled to know the manner in which the AIDS epidemic is being handled in the Cuban Army in Angola and elsewhere. Additionally, Americans should be informed about the impending depopulation of large areas in Africa and the likely effects of such events on foreign aid and military assistance programs.

Finally, I am enclosing a letter I sent this Summer to Secretary Weinberger. The central question posed in that letter has still not been briefed adequately to my staff, and I therefore renew that original request.

Recognizing the demands on your time, I nevertheless feel that the foregoing matters are sufficiently significant to warrant your direct personal involvement, and I ask that you provide that assistance.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jesse", with a stylized, cursive flourish at the end.

JESSE HELMS
Enclosure (as)

Centers for Disease Control

The Centers for Disease Control (CDC), established as an operating health agency within the Public Health Service by the Secretary of Health, Education, and Welfare on July 1, 1973, is the Federal agency charged with protecting the public health of the Nation by providing leadership and direction in the prevention and control of diseases and other preventable conditions and responding to public health emergencies. It is composed of nine major operating components: Epidemiology Program Office, International Health Program Office, Training and Laboratory Program Office, Center for Prevention Services, Center for Environmental Health, National Institute for Occupational Safety and Health, Center for Health Promotion and Education, Center for Infectious Diseases, and the National Center for Health Statistics.

CDC administers national programs for the prevention and control of communicable and vector-borne diseases and other preventable conditions. CDC develops and implements programs to deal with environmental health problems, including responding to environmental, chemical, and radiation emergencies. CDC directs and enforces foreign quarantine activities and regulations; provides consultation and assistance in upgrading the performance of public health and clinical laboratories; and participates in a nationwide program of research, information, and education in the field of smoking and health.

To ensure safe and healthful working conditions for all working people, occupational safety and health standards are developed, and research and other activities are carried out, through the CDC's National Institute for Occupational Safety and Health.

CDC also provides consultation to other nations in the control of preventable diseases, and participates with national and international agencies in the eradication or control of communicable diseases and other preventable conditions.

**HUMAN IMMUNODEFICIENCY VIRUS INFECTIONS IN THE
UNITED STATES**

**A REVIEW OF CURRENT KNOWLEDGE AND PLANS FOR
EXPANSION OF HIV SURVEILLANCE ACTIVITIES**

A Report to the Domestic Policy Council

**DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
CENTERS FOR DISEASE CONTROL**

**with support from
the Alcohol, Drug Abuse and Mental Health Administration and
the National Institutes of Health**

November 30, 1987

PREFACE

This report is a review of current information on the occurrence of human immunodeficiency virus (HIV) in the United States. It represents the first step in implementing a comprehensive national HIV surveillance program. Attachments to the report include background information, such as the steps involved in the planning and implementation of the comprehensive program, and a summary of the plan. Also included is information about items of special interest to the Domestic Policy Council (DPC), such as the status of the National Household Seroprevalence Survey, a summary of AIDS prevention programs being conducted by the Centers for Disease Control (CDC), and a review of existing information about knowledge, attitudes and behavioral change.

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A Review of Current Knowledge

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- B. Summary of the HHS Plan to Determine the Incidence, Prevalence and Risk Factors for HIV Infections
- C. Status of National Household Seroprevalence Survey
- D. CDC Information/Education Programs, Surveys of Knowledge and Evidence of Behavioral Changes

Human Immunodeficiency Virus Infections in the United States:
A Review of Current Knowledge

Executive Summary

BACKGROUND

Transmission of human immunodeficiency virus (HIV) infections in the United States can be slowed or halted by reducing or eliminating the behaviors that place individuals at risk of acquiring HIV infection.

Over 46,000 cases of acquired immunodeficiency syndrome (AIDS) have been reported to CDC since 1981 as part of a national surveillance program. Although AIDS occurs as the result of HIV infection, the mean interval from infection with HIV to the onset of AIDS exceeds seven years. Information on the number of currently infected individuals (prevalence) and the rate at which new HIV infections occur over time (incidence) is vital to monitoring the progression of the HIV epidemic.

More precise and more consistently collected data on the prevalence of HIV infection remain to be collected for individuals whose behavior places them at increased risk and for the general population. Better and more extensive information is essential for targeting and evaluating control and prevention efforts at local and State level, for predicting future health care needs, and for understanding where the HIV and AIDS epidemic is headed. Better models which make use of the specific data will also aid in our understanding of the spread of this virus. Surveillance of the prevalence and incidence of HIV infection by continually monitoring sentinel populations and expanding focused seroprevalence surveys and studies, and developing models to help interpret the data remains a critical element of the Nation's response to this major public health crisis.

HIV IN THE UNITED STATES: CURRENT KNOWLEDGE

In October 1987, an epidemiological team from the CDC, with assistance from the National Institute on Drug Abuse (NIDA)/Alcohol, Drug Abuse and Mental Health Administration (ADAMHA) and the National Institutes of Health (NIH), conducted an intensive review of published and unpublished data on the extent and trends of infection with HIV in the United States. While the various surveys and studies differ in design and cannot be precisely compared, nevertheless a description of the approximate patterns and trends of HIV infection is useful.

Infection in Groups at Recognized Risk. Observed prevalence of infection remains highest in those groups which account for the vast majority of AIDS cases.

Seroprevalence in homosexual and bisexual men in 50 surveys and studies throughout the country ranges from under 10 percent to as high as 70 percent, with most findings falling between 20 percent and 50 percent.

In 88 surveys and studies, observed HIV prevalence varies more widely for intravenous drug abusers, ranging from highs of 50 to 65 percent in the New York City vicinity and Puerto Rico to rates which vary but which are mostly below 5 percent in areas other than the East Coast.

Persons with coagulation disorders requiring clotting factor concentrates (hemophiliacs) vary in HIV prevalence depending on type and severity of the disorder--approximately 70 percent overall for hemophilia A and 35 percent for hemophilia B--but the prevalence rates appear uniform throughout the country, reflecting the national distribution of the clotting factor concentrates.

Heterosexual transmission of HIV clearly occurs. The prevalence in regular heterosexual partners of infected persons ranges from under 10 percent to 60 percent, while in partners of those at risk but of unknown HIV status the prevalence is lower, generally under 10 percent.

Infection in Groups Drawn from the General Population. In selected groups of the general population--blood donors, civilian applicants for military service, Job Corps entrants, sentinel hospital patients, and women in settings related to fertility and childbearing--HIV infection prevalence is generally a fraction of 1 percent, though seroprevalence rates vary considerably and have been found to be much higher in populations in selected inner city populations.

Persons at increased risk for HIV are asked not to donate blood and therefore prevalence and incidence rates in donor groups will under-represent the actual rates in the population. The overall prevalence of HIV antibody in Red Cross blood donors who have not been previously tested averages 0.043 percent seropositive. Applicants for military service, who under-represent persons in the principal risk groups for HIV, have a crude HIV antibody prevalence of 0.15 percent, which when adjusted to the age, sex, and race composition of the United States 17 to 59 years of age population, is 0.14 percent. Job Corps entrants, disadvantaged youths 16 to 21 years of age, thus far have a prevalence of 0.33 percent. Patients without AIDS-like conditions thus far tested anonymously at four sentinel hospitals have a prevalence of 0.32 percent, compared with a sex- and age-adjusted prevalence of 0.11 percent for military applicants from the same cities.

Childbearing women in Massachusetts, tested anonymously through filter-paper blood specimens from their newborn infants, have an HIV prevalence of 0.21 percent. This compares with 0.13 percent for female applicants for military service from the same State. The findings from surveys in womens' health clinics ranged from 0 percent to as high as 2.6 percent positive (other than in groups of pregnant drug users where the prevalence reaches nearly 30 percent). The higher prevalences occurred in areas of high AIDS case incidence in women.

Variation of HIV Prevalence by Geography, Age, Sex, and Race or Ethnicity.

The geographic distribution of HIV prevalence in blood donors and applicants for military service, and to a limited extent in homosexual men and IV drug abusers, is similar to the geographic distribution of AIDS cases, being highest on the East and West Coasts and lowest in the northern Midwest and mountain States. HIV prevalence, like AIDS case incidence, is greater in urban than in rural areas. These latter areas must be monitored closely for spread of HIV infection and targeted for prevention efforts.

Like AIDS cases, HIV infection both in general population groups and high risk groups is concentrated in young to early middle-aged adults, and is consistently more common in men and in the black and Hispanic populations.

Heterosexuals. Information on the extent of HIV infection in exclusively heterosexual, non-IV-drug using persons without known sexual exposure to partners at increased HIV risk comes from two principal sources: evaluation of risk factors in seropositive blood donors and applicants for military service, and HIV surveys in heterosexuals attending sexually transmitted disease (STD) clinics.

Limited studies of exposure risks in seropositive donors as well as in seropositive military applicants and in active duty military personnel suggest that approximately 85 percent of such individuals have identifiable risks for HIV. If the risk factor data from these limited studies are found to be consistent in more extensive national studies, then HIV prevalence levels in persons without acknowledged or recognized risks would be below 0.021 percent in military applicants and 0.006 percent in blood donors. However, more extensive studies on risk factors are urgently needed, particularly in inner city areas where heterosexual HIV transmission would be predicted to occur based upon AIDS case surveillance data.

In limited studies of the highest-risk subgroup of heterosexuals, those being treated for STD, when rigorously interviewed to assess risk factors with follow-up reinterview of seropositives, the prevalence of HIV ranges generally from 0 percent to 1.2 percent in persons without specific identified risk factors. By contrast, homosexual men at the same clinics range to over 50 percent positive.

HIV Infection Trends Over Time, Incidence of New Infection. Trend and incidence information is much less available and much more difficult to develop than prevalence data.

In the two general population groups tested over time, applicants for military service and first-time blood donors, HIV prevalence rates have remained stable for two years, although the prevalence in donors has fluctuated seasonally. Increased self-deferral of persons with risk factors or who already knew they were HIV-infected may have contributed to this observed prevalence pattern, the apparent stability reflecting the competing effects of self-deferral by infected persons and the continued occurrence of new HIV infections.

There is evidence that new infections continue to occur in blood donors, in military personnel, and in groups at increased risk. However, in some groups the rate of new infection (incidence) may have declined somewhat from the rates which prevailed in the early 1980s, since 1) declines in incidence of new infections have been observed in eight cohorts of homosexual men, the current principal risk group; 2) the net seroprevalence in military applicants and donors (which rose at some time to their current levels from zero before HIV was introduced) appears no longer to be rising; and 3) serologic screening of blood products and heat treatment of clotting factor concentrates have vastly reduced new infection in transfusion recipients and hemophiliacs. However, insufficient trend and incidence data are available to evaluate recent patterns in and heterosexually active persons or in local geographic areas such as the inner cities.

The HIV and AIDS epidemic is a composite of many individual, though overlapping, sub-epidemics each with its own dynamics and time course. While the incidence of new infection in certain subgroups may have declined somewhat, in the absence of specific information, incidence rates cannot be assumed to have declined in all subgroups or in all geographic areas. It is important that trends be monitored in IV drug abusers and in heterosexually active persons as well as in localized areas such as inner cities. There is insufficient data to determine the overall incidence and trends of HIV infection.

Implications for Estimates of National HIV Prevalence. In 1986, a large group of public health and medical specialists from within and from outside the government was convened by the PHS and developed an empirical working estimate of 1 to 1.5 million infected Americans. This was based on the estimated sizes of populations at risk and the estimated average seroprevalence values for those populations. The Institute of Medicine, National Academy of Sciences reviewed and considered this working estimate reasonable. If the estimate is recomputed in light of more recent HIV seroprevalence data and newer estimates for the size of populations at risk, little net change in the estimate occurs. If the HIV prevalence rates observed in low-risk groups, or multiples thereof, are extrapolated to the entire population, the figures fall below 1 million. When several empirical mathematical models are tested using AIDS surveillance data and disease progression rates from the well-studied San Francisco cohort, the resulting estimates of total HIV infections range from 276,000 to 1,750,000, with best estimates of 420,000 to 1,649,000. Procedures that produce such a wide range of results from the same data indicate that there are either insufficient data or insufficient models or both. Hence, there is a need for improved data and model development to assist in monitoring HIV infection in this country.

The available data and models are consistent with the PHS estimates in June, 1986. Since new infections have continued to occur during the past 17 months, this would imply that the upper range of the 1986 estimate (i.e., 1,500,000) may have been somewhat high at that time. The overall conclusion, however, is that a very large number of Americans are now

infected. The estimation of the total number of persons infected will remain complex and inexact. There is no substitute for carefully obtained incidence and prevalence data. Additional surveys and studies are needed to determine the current extent of spread of HIV through the population.

Attachments

A. Chronologies: Major Events Since 1981 and Events Since June 1987 Relating to Ongoing and Proposed Serosurveys

In June 1987, the President directed the Department of Health and Human Services (DHHS) "To carry out a comprehensive program to determine the nationwide incidence of the HIV and to predict its future occurrence and to initiate epidemiological studies to determine the extent to which HIV has penetrated the various segments of our society." On October 15, 1987, Attorney General Meese, relayed the Presidential decision that directed DHHS to proceed. Selected highlights of activities are given, including various workshops convened to review proposals for a national household seroprevalence survey and a family of serosurveys.

B. Summary of the DHHS Plan to Determine the Incidence, Prevalence and Risk Factors of HIV Infection in the United States.

The DHHS has developed a series of studies and surveillance systems to obtain additional information on the incidence and prevalence of HIV infections in the United States. This information also will contribute to improved projections of future occurrence of HIV. Accurate information is needed not only on the prevalence and incidence of HIV infection, but also on the size and location of populations at greatest risk of infection, the importance of various transmission modes (e.g., the extent of heterosexual transmission), and to evaluate the impact of prevention efforts on HIV transmission. Included in the plan is a review of current knowledge about HIV infections, the implementation of pilot studies preliminary to a nationwide HIV household seroprevalence survey, and a comprehensive family of surveys.

A large number of individuals have already been tested for HIV antibody, including over 12 million blood donors, over 1.25 million civilian applicants for military service and 2 million active duty military personnel. In addition, information is available from tests done on Job Corps applicants, admissions to hospitals and other special study groups.

Data on HIV infection levels and trends is essential at both national and local level for public health management: targeting and evaluating prevention programs, planning future health care needs, and determining health policy. To obtain information on the incidence of new HIV infections and prevalence and trends of current infections in risk groups and other defined populations, DHHS will conduct a family of HIV seroprevalence surveys and studies. Sentinel surveillance systems are being developed or expanded in 30 standard metropolitan statistical areas (SMSA) throughout the country. These include serologic surveys of sera from selected hospital admissions and from patients in STD clinics, drug abuse treatment clinics, family planning and other women's health clinics, and in tuberculosis clinics. In addition, studies of HIV antibody prevalence in newborns (and their mothers) are planned using sera from newborn infants collected routinely for testing of metabolic disorders.

On a national basis, HIV seroprevalence will continue to be monitored in: civilian applicants for military service (to be expanded to include follow-up interview of seropositive individuals to evaluate risk); blood donors, including follow-up risk factor evaluation in seropositives; and Job Corps entrants. HIV prevalence will be studied in settings of special public health interest including selected colleges, prisons and among health care workers in hospital emergency rooms. Other national data sources will be examined; cohort studies of groups at risk, including homosexual and bisexual men and IV drug users, and the ongoing household-based surveys conducted by the NCHS/CDC, will provide information on knowledge of AIDS and risk behaviors, changes in behavior, and laboratory tests for HIV infection. The Office of Science and Technology Policy (OSTP) in collaboration with the DHHS will have lead responsibility for development and application of mathematical models for estimating the overall HIV prevalence in the United States. The specific HIV information needs and the role of these various surveys and studies in meeting those needs are detailed in Attachment B.

Status reports will be provided from this family of surveys on a quarterly basis through 1989, with the first two quarterly reports projected for February 28, and May 31, 1988.

C. Status of National Household Seroprevalence Studies

As part of the comprehensive program to determine the nationwide incidence of HIV infection, a household-based survey is planned using a contractor selected through a competitive bidding process. In order to evaluate the influence of various factors that may affect the validity of this proposed nationwide study, pilot studies are planned in three metropolitan areas before a decision is made to initiate the national household seroprevalence survey. The objectives of the pilot studies include an evaluation of the effects of refusal to participate on the reliability of the survey results. Since the expected rate of infection

in the general population is well below 1 percent, under-representation in the sample of high-risk behavior groups would cause the observed rates to be under-estimated. This could lead to a false sense of reassurance that HIV infections are not spreading and a consequent reduction in measures to control the epidemic.

Pilot studies are to be implemented in the late spring of 1988 following the required development and review of protocols, solicitation of bids, evaluation of proposals, and negotiations and award of contracts. Results of the three pilot studies are expected to be available beginning October 1, 1988 and ending June 1, 1989. Following an evaluation of the pilot study results and the determination of the feasibility and need for the national seroprevalence study, study design would begin in June 1989, with results to become available between March and June 1990.

D. CDC AIDS Information/Education Programs, Surveys of Knowledge, and Evidence of Behavioral Change

In the absence of a vaccine against AIDS and having only one licensed drug of limited effectiveness against AIDS, information and education and risk reduction programs are the only means available for preventing HIV transmission and AIDS. Basic educational and informational efforts began with the recognition that AIDS was a new disease in 1981; over 21 guidelines and recommendations have been published in the Morbidity and Mortality Weekly Report (MMWR). In addition, other important educational efforts have been undertaken, including the publication of The Surgeon General's Report on AIDS in October 1986. In March 1987, a new phase in the PHS prevention program was implemented with the publication of "Information/Education Plan to Prevent and Control AIDS in the United States." The major features of this program include programs targeted toward 1) the general public, 2) school and college aged youth, 3) persons at increased risk or infected with HIV, and 4) health care workers. A major component of the program to reach the general public has been the launching of an intensive national public information campaign, in conjunction with the Presidential proclamation designating October as National AIDS Awareness and Prevention Month.

In 1987, a program was started to assist State and local education agencies and other organizations in efforts to inform and educate school and college-aged youth about AIDS and HIV transmission.

Programs targeted to persons at increased risk of HIV infection or already infected include a wide range of activities funded at the state and local health department level through cooperative agreements with the Federal government. An estimated 1,000 counseling and testing sites are operating with Federal support. Major expansion of this effort together with partner notification is scheduled for fiscal year 1988. The CDC has awarded funds to 41 state and local health departments for special emphasis on AIDS prevention, education, and risk reduction programs among minority populations. Awards have been made and will be made in the future to national minority organizations, to complement other prevention activities. Community based research demonstration projects have been

funded in six metropolitan areas to assess the effectiveness of prevention projects in changing AIDS related knowledge, attitudes, and high-risk behaviors.

The comprehensive information, education and risk reduction program was put in place in 1987, notably the National Public Information Campaign. Therefore 1987 is being considered a base year for information about knowledge and attitudes of the general population.

Considerable evidence now indicates a high level of knowledge about AIDS, although a disturbingly high percentage of the population recently surveyed by NCHS/CDC believed that it was possible for HIV infection to be transmitted by nonsexual contact between family members or by casual contact. Despite the high general level of awareness, other national polls have revealed that only 11 percent of those polled in 1986 reported changing their sexual behavior because of AIDS.

Behavioral changes resulting from AIDS prevention efforts can be assessed from studies of homosexual male cohorts over time, surveillance of sexually transmitted diseases in homosexual males and heterosexual populations, and investigations among IV drug users. In cohort studies funded by NIH involving over 5,000 homosexual men in four major cities in the United States, annual incidence rates of HIV infection have shown a dramatic decline, with rates dropping from 10 to 20 percent in 1983 to 1 to 2 percent or less in 1986. Although syphilis and gonorrhea infection rates also decreased dramatically among homosexual males during this period, syphilis recently has increased significantly among the heterosexual population. This increase in the annual incidence for syphilis has been most striking among those engaged in drug-related prostitution. Despite these positive changes, high-risk sexual behaviors are still practiced by many homosexual men. The challenge is to achieve wide spread behavioral changes despite obstacles such as cultural barriers to reaching minority homosexuals.

Information on behavior change among IV drug users is less complete and less encouraging, although fear of AIDS has apparently resulted in an increase in IV drug abusers seeking treatment in at least one pilot program in New Jersey, where coupons that could be redeemed for treatment were well used by IV drug abusers who received them. Thus it appears that IV drug abusers who are under treatment do change their behavior to reduce risks. However, most IV drug abusers are not enrolled in drug treatment programs and there is a severe shortage of available "treatment slots."

Counseling, testing, partner notification and other health education, risk reduction efforts that lead to behavior change are needed to reduce the transmission of HIV infection. The implementation of studies and surveillance systems that will provide the means to estimate the prevalence and incidence of HIV infections and to evaluate the effectiveness of prevention programs in the United States is of high priority.

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I. Introduction

Considerable information is available regarding the prevalence of infection with human immunodeficiency virus (HIV) in the United States. Less is known about the trends or incidence of the infection. Varied data are available from surveys and studies conducted by State and local health departments, medical centers, and Public Health Service and other federal agencies. The various surveys and studies differ in sampling, inclusion and exclusion criteria for subjects, rigor of ascertaining risk information, and resulting bias. The results, therefore, cannot always be validly compared. In addition, there are appreciable gaps in the available information, and caution must be exercised in generalizing from what does exist. Nonetheless, a description of the approximate patterns and trends of HIV infection is useful.

This report summarizes published and unpublished information on the status of HIV infection in the United States. The review draws from: surveillance data bases maintained by the Centers for Disease Control (CDC), the National Institute on Drug Abuse (NIDA), the National Institutes of Health (NIH), and the Department of Defense; from CDC's ongoing monitoring of published studies; and from unpublished data gathered in October 1987, by an epidemiologic team from CDC and NIDA that intensively canvassed health departments, various federal agencies, blood collection agencies, and medical research institutions. We are indebted to these public health officials and medical researchers for their cooperation and willingness to share their data for this review. The surveys and studies cited here are those in which sampling did not include persons specifically seeking to be tested (e.g., no counseling and testing center data are presented) and in which sample sizes were sufficient to permit reasonable precision. While we have tried to be complete in this review, it is possible that some surveys or studies were inadvertently missed. Every effort has been made to acknowledge the sources of data.

In this document, a positive serologic test for HIV is considered indicative of HIV infection. Unless otherwise stated, a positive serologic test consists of a repeatedly reactive screening test, such as the enzyme immunoassay (EIA or ELISA), followed by a positive supplemental test, either the Western blot assay or the indirect fluorescent antibody test. Conversion from a negative result on a previous serologic test to a positive result in a subsequent test is considered indicative of new infection.

II. Infection Prevalence in Groups at Recognized Risk

- A. Homosexual and Bisexual Men. Homosexual and bisexual men remain the major group at increased risk for HIV infection. Since 1984, 50 surveys and studies in 23 cities from 16 states show prevalence rates ranging from under 10% to as high as 70%, with most between 20% and 50% (Table 1, Figure 1). The highest percentages infected have been documented in cohorts of homosexual men in San Francisco;

Table 1

HIV ANTIBODY PREVALENCE IN HOMOSEXUAL AND BISEXUAL MEN
AVAILABLE SURVEYS AND STUDIES (1984-1987)

STATE	CITY	YEAR	NO. TESTED	PERCENT POSITIVE	SITE*	REMARKS	REFERENCE
AR CA	Statewide	87	66	12	STD		D Smith, AR Dept of Hlth, pers com
	Long Beach	87	47	28	STD		M Wallace, Long Beach City Hlth Dept, pers com
	Los Angeles	84-85	90	42		recruited cohort	Lancet 1985;2:831-2
		84	1637	50		recruited cohort	L Jacobson, Multicenter AIDS Cohort Study, pers com
	Los Angeles Co	87	35	14	DTC	IV drug users	J Arnold, Los Angeles Dept Hlth Svcs, pers com
	San Diego	87	97	25	STD	STD	M Ginsberg, San Diego Co Hlth Dept, pers com
		87	15	60	STD	IV drug users	
	San Francisco	78-87	6680	70		hep B cohort	3rd Int'l AIDS Conference Washington DC, M.3.1; 1987
						cumulative prevalence	
		84-85	821	49	community	population-based	J Am Med Assoc, 1986;255:1703
		84	799	49	community	random sample	
		85	677	50	community	"	
		86	611	40			Am J Public Health, 1987;76: 685-689
	Statewide	87	173	22	STD		"
		87	30	30		IV drug users	F Capell, CA Dept of Hlth, pers com
		87	21	10	prison		"
		87	34	12	med clin		"
		87	11	36	med clin	IV drug users	"
		87	38	5	DTC	IV drug users	CA Dept of Hlth, pers com
		87	25	8	DTC	IV drug users	F Capell, CA Dept of Hlth, pers com
	Statewide excluding San Francisco/ Los Angeles						
	Denver	84	129	52	STD	deny IV drug use	D Cohn, FN Judson, Denver Dept of Hlth, pers com
		85	104	49	STD	deny IV drug use	"
		85	19	58	STD & DTC	IV drug users	"
		86	102	46	STD	deny IV drug use	"
		86	21	52	STD	IV drug users	"
		87	172	38	STD	deny IV drug use	"
			20	30	STD	IV drug users	"
GA	DeKalb Co.	86	119	49	STD	3x IV drug users	R Poole, DeKalb Co Dept of Hlth, pers com
		87	342	42	STD	6x IV drug users	"
	Statewide	87	217	27	STD		K Sikes, GA Dept Human Res, pers com

* STD = sexually transmitted disease clinic, DTC = drug treatment center, med clin = medical clinic

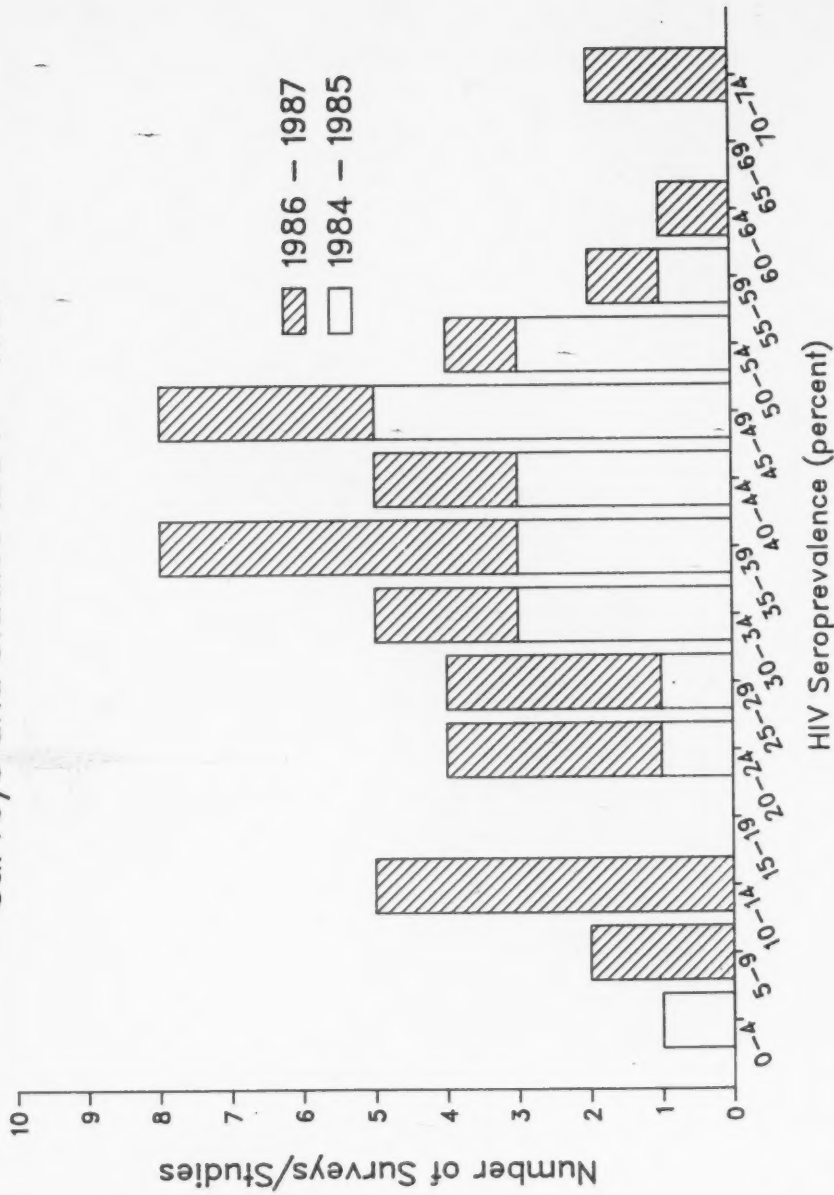
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Table 1 (Continued)

STATE	CITY	YEAR	NO. TESTED	PERCENT POSITIVE	SITE	REMARKS	REFERENCE
IL	Chicago	84	1102	41		recruited cohort	L Jacobson, Multicenter AIDS Cohort Study, pers com
KY	Lexington/ Louisville	86	80	23	STD	45 IV drug users	R Finger, KY Dept Hlth Serv, pers com
MA	Boston	84	571	49		recruited cohort	1st Intl AIDS Conf, 1985; Abstracts: p 27
	Statewide	87	183	21	STD	asymptomatic self-administered questionnaire	J Day, MA Dept of Hlth, pers com
MD	Baltimore	87	193	35	STD	deny IV drug use self-administered questionnaire	R Cannon, J Hopkins Univ & CDC, pers com
MD/DC	Baltimore/ Washington	84	1153	30		10% IV drug use recruited cohort	L Jacobson, Multicenter AIDS Cohort Study, pers com
MO	Kansas City	87	63	35	STD		R Bly, MO Dept Hlth, pers com
MN	Bernalillo Co	86	74	12	STD		J Wilson, MN Dept Hlth Environ Dept, pers com
NY	NYC	84	33	36		recruited cohort, asymptomatic	1st Intl AIDS Conf, 1985; Abstracts: p 27
		85	357	36			JL Martin, Columbia Univ School Pub Hlth, pers com
		85	74	36	STD		Sex Transm Dis, 1987;14:48-51
PA	Pittsburgh	86	129	36	STD		MA Chlason, NYC Dept of Hlth, pers com
		84	50	0			Ann NY Acad Sci, 1984;314:544-548
		84	1062	20		recruited cohort	L Jacobson, Multicenter AIDS Cohort Study, pers com
WA	Philadelphia	87	43	70	STD	12% IV drug users	H Goldberg, Philadelphia Dept Pub Hlth, pers com
	Seattle	85	109	32	STD		Am J Pub Hlth, 1986;76:564-5
		85	59	42	gay clinic	most with STDs	H Handsfield, R Wood, Seattle-King Co Dept of Pub Hlth, pers com
		85	166	33	STD	self-selected	H Handsfield, Seattle-King Co Dept of Pub Hlth, pers com
		86	24	58	STD	self-selected	"
		87	18	39	STD	self-selected	"
WI	Madison (?)	84-85	113	28		recruited cohort	Int Soc STD Res, Brighton, 1985, Abstract #4, p30

* STD = sexually transmitted disease clinic, DIC = drug treatment center, med clin = medical clinic

Figure 1
HIV Antibody Prevalence in Homosexual and Bisexual Men
Surveys and Studies 1984 - 1987



otherwise, the geographic distribution of HIV prevalence varies without major concentration in any one region.

These data probably over-estimate the prevalence of HIV infection in homosexual and bisexual men in the study areas since most surveys have been conducted in patients at sexually transmitted disease (STD) clinics. Such clinics bring to medical attention persons whose sexual behavior has put them at high risk of exposure to various sexually transmitted infections, including HIV. Few data are available on the prevalence of infection in homosexual and bisexual men who are not seeking medical care, including those who may be at lower risk of infection.

In collaboration with State and local health departments, CDC is expanding HIV serosurveys in sexually active persons at STD clinics.

- B. Intravenous Drug Users. The prevalence of HIV infection in intravenous (IV) drug users shows marked geographic variation. The prevalence observed in 88 studies in 52 cities from 26 states includes rates typically from 50% to 60% in New York City, northern New Jersey and Puerto Rico to rates which vary but which are predominantly below 5% in most areas of the country apart from the East Coast (Table 2, Figure 2).

The majority of the available data were obtained from surveys at drug abuse treatment facilities which primarily treat heroin addicts. Patients in drug treatment are believed to be only about 15% of the estimated 1.1 million IV drug users in the country. Some evidence suggests that many of those not in treatment are habitual users who may be at even higher risk for HIV infection. On the other hand, the estimated 200,000 persons who are intermittent users may have a lower prevalence of infection due to less frequent exposure to contaminated needles or equipment.

Clearly the problem of HIV in IV drug users is severe in regions of the country, especially the Northeast. Those areas which currently have a lower prevalence have the potential for substantial increase in infections in persons who share intravenous needles and equipment. Moreover drug-use-associated HIV infection affects more than just the drug users. Their sexual partners and children are also at risk. IV-drug-use-acquired infection was the source for the majority of heterosexual contact AIDS cases in the United States (which reflect HIV transmission patterns a few years ago) and the direct and indirect source for the great majority of perinatally acquired AIDS cases (Chamberland & Dondero, 1987). Due to the lengthy incubation period between infection and development of AIDS, currently estimated at a median of at least 7 years (CDC, unpublished data), the local status of IV-drug-use-associated HIV infection cannot necessarily be inferred from risk factor determination in AIDS cases. HIV surveillance through surveys and studies in IV drug users is essential for targetting and evaluating health education and risk reduction activities. In collaboration

Table 2

HIV ANTIBODY SEROPREVALENCE IN INTRAVENOUS DRUG USERS
AVAILABLE SURVEYS AND STUDIES 1984-1992

STATE	CITY	YEAR	SETTING ¹	NO. TESTED	PERCENT POSITIVE	REMARKS	REFERENCE
AR	Statewide	87	STD clinic	56	0		D Smith, AR Hlth Dept, pers com
CA	Long Beach	86-87	OTC	286	1		M Wallace, Long Beach Hlth Dept, pers com
		87	STD clinic	76	7		"
	Los Angeles	85	meth	15	0		M Eng J Med, 1986;314:446
		86	detox/meth	728	2	5/7+ males were homo/bisexual	3rd Intl AIDS Conf, 1987, Abstracts, TNP.51
	Los Angeles Co	87	OTC	178	3		R Battjes, NIDA, pers com
		87	OTC	293	5		J Arnold, Los Angeles Dept of Hlth, pers com
	Orange Co	85-87	prison	774	4	white prostitutes	P Gitt, Univ So California, pers com
		85-87	prison	62	2	black prostitutes	"
		85-87	prison	450	3	Hispanic prostitutes	"
	San Diego	87	STD clinic	75	15		M Ginsberg, San Diego Hlth Dept, pers com
	San Francisco	84-85	detox/meth	234	12	heterosexual males	Am J Pub Hlth, 1987;77:169-172
	San Francisco	85	meth	128	5		M Eng J Med, 1986;314:446
		86	detox	230	7	Haight-Ashbury	3rd Intl AIDS Conf, 1987, Abstracts T.10.4
		86	"street"	239	16	chain referral	"
		87	detox and "street"	567	17		J Walters, Haight-Ashbury Free Med Clin, pers com
	7 Counties Southern CA	85	meth	345	2		M Eng J Med, 1986;314:446
	Statewide	86	OTC	413	1		W Lange, Am J Pub Hlth, in press
		87	STD clinic	228	6		F Capell, CA Hlth Dept, pers com
		87	OTC	961	2	heterosexual	M Hughes, CA AIDS Program, pers com
		87	OTC	27	7	homosexual men	"
		87	prison	611	1	homosexual men	M Hughes, CA AIDS Program, pers com
		87	prison	13	15	heterosexuals	"
		87	med clin	101	2	homosexual men	F Capell, CA Hlth Dept, pers com
		87	med clin	11	36	heterosexuals	"
	Denver	85	STD clin	52	21	homosexual men	J Douglas, ICAAC, 1986
		85	meth/ drug free residence	263	2		T Novotny, CDC, pers com
		86	STD clinic	90	13		D Cohn, Denver Hlth Dept, pers com
		86	OTC	100	5	3 of 5 + were homosexual men	W Lange, Am J Pub Hlth, in press
		87	STD clinic	210	5		D Cohn, Denver Hlth Dept, pers com

¹ OTC = drug treatment center, type not specified, detox = detoxification, meth = methadone maintenance, med clin = medical clinic,
med exam = medical examiner

continued...

Table continued

STATE	CITY	YEAR	SETTING ¹	NO. TESTED	PERCENT POSITIVE	REMARKS	REFERENCE
CT	Hartford	85	DTC	45	7		L Petersen, CT Dept of Hlth & CDC, pers com
		86-87	DTC	83	13		"
		86-87	hospital	50	44	male patients	E Kristunas, St Francis Hosp, pers com
	New Haven	86-87	hospital	17	41	female patients	"
		86-87	DTC	137	26	prevalence varies with distance from NY City	L Petersen, CT Dept of Hlth & CDC, pers com
DE	Stamford	86-87	DTC	34	38		"
	Waterbury	86-87	DTC	37	19		"
	4 Cities	86-87	DTC	291	23		"
	Statewide	87	DTC	52	8		"
	Miami	86	meth	186	5		T Welch, DE Hlth Dept, pers com
FL	Tampa	86	DTC	100	0	2 + in 10 later specimens	2nd Intl AIDS Conf, 1986, Abstracts, 619
		86	DTC	100	0		W Lange, Am J Pub Hlth, in press
	Atlanta	87	DTC	100	10		K Sikes, GA Dept of Hlth, pers com
	Dekalb Co	87	STD clinic	172	10		R Poole, Dekalb Co Hlth Dept, pers com
	Chicago	84-85?	meth	35	11		1st Intl AIDS Conf, 1985, Abstracts, p44
IL	Lexington	86-87	obstetrics	60	25	females	I Chasnoff, NW Med School, pers com
		87	STD clinic	24	0		R Finger, KY Hlth Dept, pers com
	New Orleans	85	DTC	230	1		V Shorty, LA State Drug Agency, pers com
	Boston	86-87	hospital	360	28	hospital patients	D Craven, Boston City Hosp, pers com
	New Bedford	86	meth	114	24		3rd Intl AIDS Conf, 1987, Abstracts, Th 5.1
MA	Statewide	87	STD clinic	39	28		J Day, MA Hlth Dept, pers com
	Baltimore	86	detox	36	17		F Polk, J Hopkins Univ, pers com
	MD	86	DTC	184	29		W Lange, Am J Pub Hlth, in press
		86-87	prenatal	115	30		J Johnson, U of MD, pers com
		87	STD clinic	157	18		R Cannon, J Hopkins Univ & CDC, and ICAC, 1987, pers com
ME	Statewide	85	prison	92	20	same study site and design	F Polk, J Hopkins Univ, pers com
	Lewiston	86	prison	148	16		"
	Detroit	87	multi-drug	27	4		K Hobson, St Mary's Hosp, pers com
		85/86	meth	96	12	entering hospital drug treatment	J Inf Dis, 1987;155:1511-2
		86	DTC	151	7	at intake	D Stenke, MI Hlth Dept, pers com
MN	Minneapolis	86	hospital	141	11	hospital patients	"
		87	DTC	100	6	private clinic	"
	St. Louis	85	meth	32	0		Pub Hlth Reps, 1987;102:391-4
		87	DTC	231	1		R Dinella, MI Hlth Dept, pers com
	Kansas City	87	meth	62	0		C Roe, State Drug Agency, pers com
MO	St. Louis	87	meth	33	0		H Israel, State Drug Agency, pers com
		87	meth	33	0		"

¹ DTC = drug treatment center, type not specified, detox = detoxification, meth = methadone maintenance, med clin = medical clinic, med exam = medical examiner

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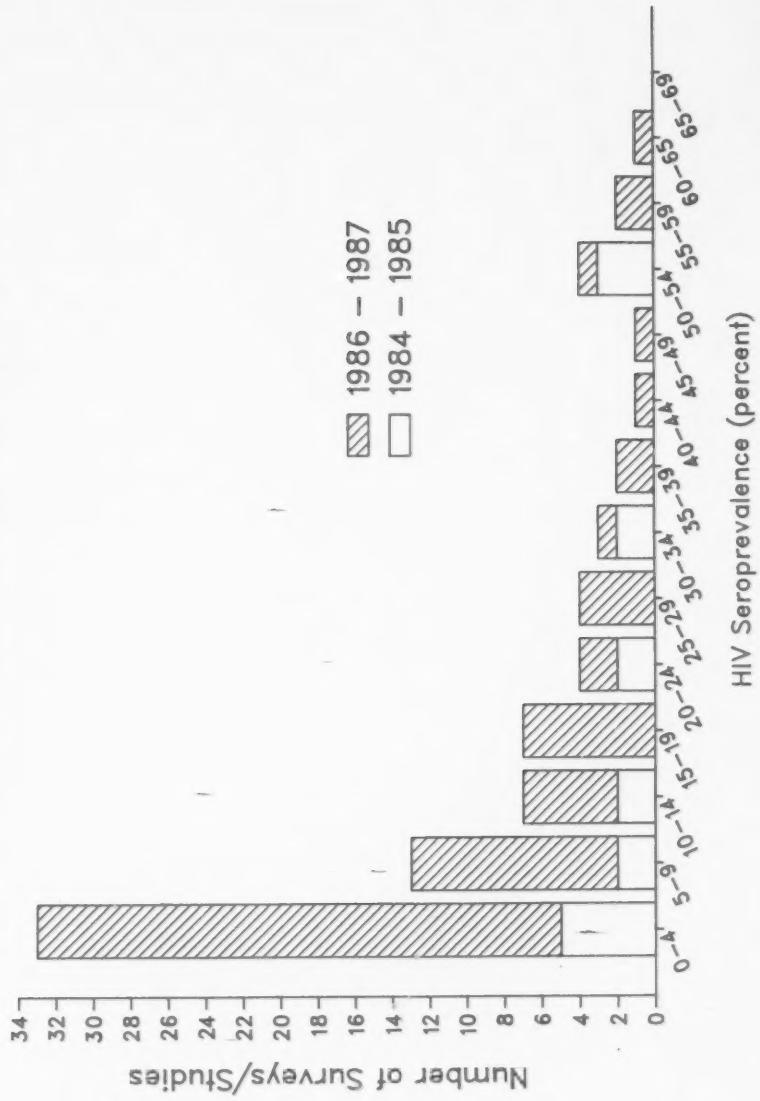
Table 2 (inued)

STATE CITY	YEAR	SETTING ¹	NO. TESTED	PERCENT POSITIVE	REMARKS	REFERENCE
NJ	84	DTC	NA	50		1st Intl AIDS Conf, 1985, Abstracts, p44
	87	DTC	69	39		R Battjes, NIDA, pers com
	84?	DTC	1300	2-59	prevalence varies with distance from NY City	2nd Intl AIDS Conf, 1986, Abstracts, 179
NM	86-87	DTC	419	1		J Wilson, NM Hlth Dept, pers com
NY	85	meth	443	32		2nd Intl AIDS Conf, 1987, Abstracts, MP. 201
	85-86	meth	473	38		G Friedland, Montefiore Hosp, pers com
	85	DTC	553	54	entrants, annual physical/banked sera Brooklyn, N=188, 53% + Harlem, N=209, 57% +	WR Lange, Am J Public Hlth, in press
	87	DTC	237	57		R Battjes, NIDA, pers com
Manhattan	84	detox/meth	290	51		AIDS, 1987;1:39
NYC	86	meth	165	49		3rd Intl AIDS Conf, 1987, Abstracts, MP. 201
	85	STD	51	33	ELISA only	San Trans Dis, 1987;14:48-51
	85-87	"street"	12	50	prostitutes	3rd Intl AIDS Conf, 1987, Abstracts, WP. 55
	86	DTC	280	61	Brooklyn 65%, Harlem 53%	W Lange, Am J Pub Hlth, in press
OH	86	meth	25	0	WB on low ELISA	P Seligman, Am J Pub Hlth, in press
	86	meth	108	1	results only	"
	86	meth	66	0	"	"
	86	meth	250	2	"	"
Dayton	86	meth	56	3	"	"
	86	meth	508	1	"	"
PA	87	STD clinic	43	19		M Goldblum, Phila Hlth Dept, pers com
PR	86?	DTC	88	59		P Sanchez, 3rd NE Regional Meth Conf, 1986
TX	86	DTC	106	2	2 + from Northeast	WR Lange, Am J Pub Hlth, in press
	87	DTC	97	0		R Battjes, NIDA, pers com
WA	87	VA DTC	145	1		JL Black, Am Psych Assn Convention, 1987
	86-87	med exam	42	5	males, + were homosexual females	S Hopkins, Seattle Hlth Dept, pers com
Tacoma	86-87	med exam	8	0		"
	87	prison	71	0		J Jourdan, Seattle Hlth Dept, pers com
	85-87	meth	247	1		J McGough, Pierce Co Hlth Dept, pers com
WI	86	DTC	264	2		E Belongia, WI Hlth Dept, pers com
WY	87	DTC	10	0		J Crew, WY Hlth Dept, pers com

¹ DTC = drug treatment center, type not specified, detox = detoxification, meth = methadone maintenance, med clin = medical clinic
med exam = medical examiner

Figure 2

HIV Antibody Prevalence in IV Drug Users Surveys and Studies 1984 - 1987



with NIDA and State and local health and drug abuse departments, CDC is increasing the number and the standardization of serologic surveys at drug abuse treatment centers.

- C. Hemophiliacs. Before the screening of blood and plasma and heat treatment of clotting factor concentrates became routine in 1985, persons with coagulation abnormalities requiring intravenous clotting factor replacement as therapy were infected with HIV. The high prevalence of HIV infection (Table 3) in the estimated 15,500 persons with hemophilia A or B (Host Factors Division, CDC, and National Hemophilia Foundation, pers com) is uniformly distributed throughout the United States, reflecting the national distribution of the clotting factor concentrates which they received before 1985. The available studies indicate differences of HIV infection by type and severity of coagulation disorder. Overall, approximately 70% of tested persons with hemophilia A (Factor VIII deficiency) and 35% with hemophilia B (Factor IX deficiency) are seropositive. Because hemophilia B tends to be less severe than hemophilia A, patients with hemophilia B generally need fewer treatments with clotting factor and consequently have had fewer exposures to HIV-infected factor concentrates. Since most of the serologic surveys have been done at hemophilia treatment centers, where persons with severe hemophilia are more likely to be encountered than persons with mild disease, the HIV seroprevalence rates probably over-represent the true rate for hemophiliacs as a group.

All factor concentrates currently manufactured for use in the United States are made from plasma from donors screened for HIV and are heat treated to inactivate the virus. Follow-up studies of seronegative hemophiliacs receiving heat-treated factor concentrates are under way throughout the world.

- D. Heterosexual Partners of Persons with HIV Infection or at Recognized Risk. A limited number of studies have been done in persons otherwise without identified risks who are heterosexual sex partners of HIV-infected persons. The prevalence of infection observed in these populations is appreciable, varying from under 10% to as high as 60% (Table 4). It is not clear whether these differences reflect different levels of infectiousness of source partners from the various risk groups or reflect differences in the frequency or type of sexual exposure, the duration of infection in the source partner, coexisting infection such as genital ulcers in one or both partners, or the clinical status of the source partner. Recent evidence suggests that infectiousness increases with the deterioration of the source partner's immune system (Goedert, et al, 1987). The relative efficiency of male-to-female versus female-to-male transmission may be an important determinant in rates of heterosexual transmission, but there are not yet sufficient data to definitively evaluate differences (Peterman, et al, 1987).

Table 3

HIV ANTIBODY PREVALENCE IN HEMOPHILIACS
AVAILABLE SURVEYS AND STUDIES 1984-1987

<u>STATE</u>	<u>CITY</u>	<u>YEAR</u>	<u>TYPE OF HEMOPHILIA</u>	<u>NO. TESTED</u>	<u>PERCENT POSITIVE</u>	<u>REFERENCE</u>
CA	Los Angeles	83-84	A	18	100	N Engl J Med 1985;312:483-6
		84	A	41	59	Am J Med 1986;80:345-50
		84	B*	11	36	"
MA	Boston	83-84	A severe-moderate	44	73	Nature 1984;312:367-69
		83-84	B	6	17	"
		83-84	A severe-mild	120	73	J Peds 1986;108:504-10
MO	St. Louis	84	B	16	69	Blood 1987;70:276-81
		84	A severe-moderate	40	78	Ann Allergy 1986;57:376-84
		85	A severe-moderate	62	89	
MN	Minneapolis	85-87	A	76	83	R Dinella, MN Dept of Hlth, pers com
		85-87	B*	18	22	
NM	Albuquerque	84-85	A	42	33	West J Med 1986;145:477-480
		84-85	B*	7	43	"
OH	Cleveland	84	A	23	78	Ann Int Med 1986;102:753-57
PA	Hershey	82-84	A	75	72	Blood 1985;65:492-95
		82-84	B	12	0	
		86	A	111	83	Ann Int Med 1987;107:1-6
	Pittsburgh	84	A	82	74	Blood 1986;67:592-95
		84	B	30	30	"
WA	Seattle	84		26	77	Blood 1985;66:718-20
WI		85	A	43	79	J Peds 1986;108:511-16
Nat'l	10 hemophilia treatment centers	86	A severe	541	75	J Goedert, NCI, NCI
		86	A moderate	62	40	Multicent. Study of AIDS
		86	A mild	137	26	in Hemophil., pers com
		86	B severe	71	39	"
		86	B moderate	17	18	"
		86	B mild	41	63	"
		86	von Willebrand's	54	63	"
		87	various (children/adolescent ctr)	444	46	E Gomperts, Children's Hospital, LA, pers com
Multicenter		82-84	A	160	79	J Am Med Assoc, 1985;253:3409
		82-84	B*	32	38	"
Multicenter		85	A	117	92	JM Jason, ICAAC, 1986
		85	B*	58	52	"

*Persons in this study were treated with Factor IX concentrate. Although most persons requiring Factor IX therapy have hemophilia B, some persons with hemophilia A may be included in this category.

Table 4

HIV ANTIBODY PREVALENCE IN HETEROSEXUAL PARTNERS OF HIV-INFECTED PERSONS
AVAILABLE STUDIES 1984-1987

STATE	CITY	YEAR	NO. TESTED	PERCENT POSITIVE	SEX	HIV+ SOURCE PARTNERS	REFERENCE
AR	Statewide	87	8	0	F	various	D Smith, AR Dept of Hlth, pers com
CA	Los Angeles	82-84	21	10	F	hemophiliacs	Ann Intern Med, 1985;102:623-6
	San Francisco	85-86	19	21	F	hemophiliacs	J Am Med Assoc, 1987;258:788-90
		85-86	55	24	F	bisexual men	"
		85-86	12	42	F	IV drug users	"
		85-86	4	25	F	transfusion recipients	"
		85-86	35	35	F	various	C Wofsy, Univ CA San Francisco, pers com
FL	Miami	86-87(?)	45	58	M & F	persons with AIDS	J Am Med Assoc, 1987;257:640-4
MD	Bethesda	85-86(?)	22	36	M & F	various	2nd Intl AIDS Conf, 1986, Poster 207
NY	NYC	83-85(?)	42	48	M & F(?)	persons with AIDS or ARC	ICAAC, 1985, Abstract No. 219
		86	11	55	M	persons with AIDS	ICAAC, 1986, Proceedings, No 11, p98
		87	7	43	F	bisexual men	M Steigbigel, 3rd Intl AIDS Conf, 1987, Abstracts, p106
							and pers com
		87	69	46	F	IV drug users	"
		87	5	60	M	IV drug users	"
PA	Hershey		24	17	F	hemophiliacs	J Goedert, 3rd Intl AIDS Conf, 1987, Abstracts, p106
	Multistate-GA, OH, NY	83-86	21	10	F	hemophiliacs with AIDS or ARC	J Am Med Assoc, 1986;255:212-215
USA	National		55	18	F	transfusion recipients	T Peterman, J Am Med Assoc, (in press)
			25	8	M	transfusion recipients	"
FRANCE			148	7	F	hemophiliacs	N Engl J Med, 1986;315:517-8
ENGLAND			36	8	F	hemophiliacs	Brit Med J, 1985;291:695-9
ENGLAND			14	0	F	hemophiliacs with AIDS or ARC	Brit J Haematol, 1986;63:347

Since persons at recognized risk--bisexual men, IV drug users, and hemophiliacs--are not all infected, their heterosexual sex partners would be expected to have a lower infection prevalence than partners of persons known to be infected. Indeed, limited seroprevalence data from heterosexual partners of high risk persons of unknown HIV status (Table 5) indicate a somewhat lower risk, ranging from 0% to 11%.

CDC, in collaboration with State and local health departments is expanding the number of HIV surveys in STD clinics. In part, these surveys will evaluate risk factors in STD patients and should help clarify the level of risk to heterosexual partners of persons at high risk.

III. Infection Prevalence in Selected Segments of the General Population

The general population includes persons at various levels of risk for HIV infection. The following groups for which data are available are drawn from the general population and are biased to differing extents. That bias depends both on the degree of restriction against, and/or self-exclusion of, persons with at high risk and on the sociodemographic and geographic composition of the groups. The following discussion summarizes 1) the available information on HIV seroprevalence in these groups, adjusted where possible by age, sex, and race or ethnicity to be comparable with the general U.S. population and 2) the apparent biases for each group surveyed. Adjustment of data for a group by age, sex, and race does not make it "representative" of the population from which the group is drawn; representativeness is a result of unbiased sampling. Adjustment, however, permits more meaningful comparison of rate data from two different groups. This section (III) deals with the overall HIV seroprevalence in these groups. Geographic and demographic differences within the groups and infection trends over time are discussed in sections V and VII below. Since persons at high risk are under-represented in three of the five groups--blood donors, military applicants and Job Corps entrants--the detected prevalence of HIV infection in these groups presumably is lower than the true prevalence in the demographic segments of the general population from which they are drawn.

- A. Blood Donors. Verbal screening of prospective blood donors for HIV risk factors, and the request that persons with such risk factors refrain from donation, began in 1983 in an attempt to eliminate as donors persons who had potentially been exposed to the agent causing AIDS. Since early 1985, donated blood and plasma have been screened for HIV antibody and HIV-infected units have been discarded.

In the highly selected population of blood donors the prevalence of HIV infection is low, 0.020% for 12.6 million American Red Cross blood donations between April 1985, and May 1987 (approximately half of all voluntary donations in the United States). The overall level has declined from 0.035% in mid-1985, to 0.012% in mid-1987,

Table 5

HETEROSEXUAL PARTNERS OF PERSONS AT HIGH RISK* BUT OF UNKNOWN HIV STATUS
AVAILABLE HIV SEROPREVALENCE STUDIES 1984-1987

<u>STATE</u>	<u>CITY</u>	<u>YEAR</u>	<u>NO. TESTED</u>	<u>PERCENT POSITIVE</u>	<u>SEX</u>	<u>REMARKS</u>	<u>REFERENCE</u>
AR	Statewide	87	59	0	M & F	STD clinic	D Smith, AR Dept of Hlth, pers com
MA	Statewide	87	68	3	M & F	STD clinic	J Day, Mass Dept Public Hlth, pers com
MD	Baltimore	87	226	4	M & F	STD clinic	R Cannon, J Hopkins Univ. & CDC pers com
NY	NYC	86-87	124	11	M & F	STD clinic	M A Chiasson, NYC Dept of Hlth, pers com

*IV drug users, bisexual men, hemophiliacs

(R. Dodd, American Red Cross, personal communication) primarily as a result of eliminating previously identified seropositive persons from the donor pool (see Section V. A). Donors tested for the first time probably provide the best estimate of the HIV prevalence in the segment of the population from which donors are drawn. The overall prevalence in first time donors from 1985 to 1987 was 0.043% (R. Dodd, American Red Cross, personal communication). The prevalence figure cannot yet be adjusted by age, sex or race, but rates are known to be much higher in men than in women, and higher in blacks and Hispanics than in whites (section V.C and D). Despite the selected nature of blood donors with regard to HIV risk factors, 80% to 90% of seropositive donors interviewed have recognized risk factors for infection (see section IV below). CDC in collaboration with blood collection agencies and State health departments is expanding the national network of HIV surveillance in American blood donors and is expanding and standardizing the evaluation of risk factors in seropositive donors to monitor trends in HIV transmission in "low risk" populations.

- B. Civilian Applicants for Military Service. Since October 1985, all persons volunteering for active duty or reserve military service, the service academies, and the Reserve Officer Training Corps (ROTC)—a total of over 600,000 persons per year—are serologically screened for HIV infection as part of their entrance medical evaluation. The Department of Defense shares the resulting statistical data with CDC for HIV surveillance purposes.

Military applicants are interviewed by recruiting officials regarding drug use and homosexual activity (both of which are grounds for exclusion from entry into military service) prior to referral for medical evaluation. Potential applicants are informed that they will be screened for HIV. It is expected, therefore, that military applicants who are medically evaluated under-represent IV drug users and homosexual and bisexual men, as well as persons with coagulation deficiencies.

The crude overall prevalence of HIV infection in military applicants is 0.15%. Applicants are largely male and limited in age range. Racial and ethnic minorities are over-represented. When the crude prevalence rate is corrected to reflect the age, sex, and racial and ethnic composition of the U.S. adult population 17 to 59 years of age, the prevalence is 0.14%.

As described in section V, the infection prevalence varies considerably by geographic area, age, sex, and race or ethnicity (See section IV.C). From the very limited data thus far available, most of HIV seropositive military applicants who were interviewed have recognized risk factors for infection, even though persons at increased risk are under-represented among applicants. The Walter Reed Army Institute of Research, Department of Defense, in collaboration with CDC and State and local health departments is undertaking a systematic evaluation of risk factors in seropositive

military applicants as a method of monitoring trends in mode of HIV transmission in the general population.

- C. Job Corps Entrants. Since March 1987, HIV antibody screening has been required as part of the medical evaluation of new participants in residential training programs of the Job Corps (Department of Labor). No such requirement applies for the non-residential programs; HIV antibody testing and counseling are offered to, but not required of, nonresidential participants. Job Corps entrants, approximately 60,000 of whom will be serologically screened annually, are disadvantaged youths 16 to 21 years of age. They are drawn heavily from the racial and ethnic minorities and represent both the inner-city and the rural poor. There is no entrance restriction on the basis of sexual orientation or hemophilia. Active IV drug addicts are not accepted in the Corps.

Of the first 25,000 residential Job Corps entrants tested, 0.33% were HIV positive (C. Hayman, Job Corps, Dept. of Labor, personal communication). It has not yet been possible to adjust this rate to account for the age, sex, or racial or ethnic composition of the group.

- D. Sentinel Hospital Patients. To sample a non-self-selected general population, CDC initiated a network of sentinel hospitals in collaboration with the participating institutions in September 1986. In these institutions, serum or plasma specimens available from patients of all ages who are being treated for conditions not known to be related to HIV are tested for HIV antibody in a blinded, or unlinked, fashion. The blinded approach is necessary to avoid 1) involuntary HIV testing of identifiable persons and 2) a volunteer sample, with all the attendant and uninterpretable self-selection biases. Thus far, results are available for preliminary analysis from the four hospitals in the Midwest which participated in the pilot phase.

Based on first 8668 test results, the overall age- and sex-adjusted prevalence of infection is 0.32%. By comparison, the prevalence among military applicants from the same four cities adjusted by age and sex for comparability with the sentinel hospital sample is 0.11%. The infection prevalences at the institutions range from 0.09% to 0.89%.

Sampling at sentinel hospitals is based strictly on the patient's current clinical condition or clinical service, without regard to risks for HIV infection. Although unbiased in terms of self-selection related to risk factors or known HIV status, the hospital population samples are not truly representative of their communities, since they are sick and since different hospitals serve different segments of the community. The hospital population actually sampled does not represent the highest risk group of patients at these hospitals, who would be expected on the infectious disease and cancer services and in such specialized

settings as the emergency room where gunshot and knife wound victims are treated. In a recent study of critically ill patients at a Baltimore, Maryland, emergency room, six of 203 patients (3%) were HIV antibody positive. Five of these six were gunshot or knife wound victims (Baker et al, 1987).

The major value of the sentinel hospital network is to monitor change in HIV prevalence over time in a non-self-selected sentinel population, which should reflect change in infection level occurring in the community. In collaboration with State and local health departments, CDC is rapidly expanding the number of sentinel institutions to a target of 40 such sites. In addition, CDC is exploring similar sentinel surveillance in collaboration with such groups as consortiums of family practice physicians and laboratories which receive diagnostic specimens from these physicians.

- E. Newborn Infants and Women of Reproductive Age. Newborns throughout the country are routinely screened for treatable metabolic disorders by filter-paper blood specimens collected by heel-stick puncture shortly after birth. Methods have recently been developed by the Massachusetts Department of Public Health to test these specimens for HIV antibody (Marwick, 1987). Since the tests measure maternal antibody that was passively transferred to the newborn, this approach detects HIV infection in women who have borne live infants. (The risk of HIV transmission from an infected mother to her infant is estimated to range from 30% to 50% (Blanche et al, 1987; Mok et al, 1987; Nzilambi et al, 1987; Scott et al, 1987; Semprini et al, 1987), and HIV antibody in the newborn does not necessarily indicate infection in the child.)

Thus far, filter-paper blood testing of newborns has been conducted only in Massachusetts. Testing is blinded, and the only information currently retained with the specimens is general location of the hospital of birth: inner-city, suburban, or rural. With 30,708 tests in 1986-1987, the weighted average prevalence of infection was 0.21% among childbearing women statewide (G. Grady, Massachusetts Department of Public Hlth., personal communication). The prevalence varied from 0.80% for women delivering at inner-city hospitals to 0.09% at suburban and rural hospitals. Compared with the overall 0.21% in child bearing women, female military applicants from Massachusetts have a crude prevalence of 0.13%. Because information on the age and race of mothers was not collected in this study, the Massachusetts women's HIV statistics cannot be adjusted for precise comparison with military applicant data.

The prevalence observed by this method truly represents the population of childbearing women and is unbiased in terms of self-selection or exclusion related to HIV risk factors (although childbearing women, per se, are not truly representative of all women or even of all women of reproductive age). CDC in

collaboration with State and local health departments and the National Institutes of Health is supporting the rapid, widespread application of the filter-paper blood test methodology for HIV surveillance and public health management purposes. Nationwide, female military applicants have a crude HIV seroprevalence of 0.07%. When adjusted by race and age (to the United States population 17 to 59 years of age) the prevalence is 0.04%. HIV prevalence information is available from 27 studies of women in settings related to women's health and childbearing (Table 6). These studies were conducted in 19 cities or areas in 12 States targeted heavily in inner-city areas where appreciable levels of infection were anticipated based on data on AIDS cases and drug use. Except in groups of women specifically known to be at high risk for HIV (e.g., drug users), the findings range from a fraction of 1% in most areas to as high as 2.6% in the New York area and in Puerto Rico. (Rates up to nearly 30% were found in groups composed of pregnant drug users.) The rates in women not specifically selected because of high risk may represent the upper range for HIV prevalence in reproductive-aged American women in view of the cities and the facilities involved.

IV. Infection Prevalence in Special Settings

Prisoners, prostitutes, tuberculosis patients, and college students are unique not only because they represent epidemiologically specialized situations but also because public health approaches for HIV prevention and control in these groups differ from those in the general population or in groups at increased risk.

- A. Prisoners. Prisoners over-represent past or current IV drug users. Because of the special public health concerns over homosexual and drug-sharing exposures among prisoners, the HIV infection prevalence in prisons is of particular interest.

Thus far, observed HIV prevalence in prisoners (Table 7) is higher than the prevalence in general population groups. However, except for groups specifically tested because of risk for HIV, the prevalence rates are considerably lower than the rates seen in risk groups. In collaboration with the National Institute of Justice, Department of Justice, CDC will support additional prevalence surveys in a number of State and federal corrections systems.

- B. Prostitutes. Women who exchange sex for money or drugs are a group of particular concern for HIV infection. (Male prostitutes, whose sexual exposure is predominately with other men, are not discussed here, but are included with homosexual and bisexual men.) Female prostitutes are at risk of infection both because of the IV drug use which is common among these women (income from prostitution being a means of paying for drugs) and because of multiple sexual exposures. In addition to the HIV and AIDS risk to the women themselves, they are also a potential source of infection for their babies and for their male clients. The prevalence of HIV infection

Table 6

HIV ANTIBODY PREVALENCE IN WOMEN OF REPRODUCTIVE AGE
AVAILABLE SURVEYS AND STUDIES IN SETTINGS RELATED TO WOMEN'S HEALTH AND CHILDBEARING 1984-1987

STATE	CITY	YEAR	TYPE OF CLINIC*	NO. TESTED	PERCENT POSITIVE	REMARKS	REFERENCE
AL	Montgomery	87	fam plan	694	0.3		B Merrill, AL Hlth Dept, pers com
CA	Alameda Co	85-86	premarital	377	0.5		J Am Med Assoc, 1987;258:474-475
	Los Angeles	87	delivery	500	0.4	WB to be repeated	M Yonekura, Harbor UCLA Med Center, pers com
	Long Beach	86-87	prenatal	227	0.0		H Wallace, Long Beach Hlth Dept, pers com
	Sacramento	87	fam plan	88	0.0		B Hinton, Sacramento Co Hlth Dept, pers com
FL	Jacksonville	86-87	prenatal	299	0.7		A Kaunitz, Univ Hosp, Jacksonville, pers com
IL	Central IL	87	prenatal	97	0.0		M Derrig-Green, priv prac, pers com
	Chicago	86-87	pregnant drug users	150	10.7	40% were IV drug users	I Chasnoff, NW Univ Med Sch, pers com
		86-87	pregnant drug users	102	9.8	primarily IV drug users	S Gall, Univ IL, pers com
MA	Statewide	86-87	newborn (i.e., childbearing women)	30,708	0.2	filter paper test, weighted rate	G Grady, MA Hlth Dept, pers com
MD	Baltimore	85	delivery	678	0.7		T Townsend, J Hopkins Univ, pers com
		86-87	prenatal	115	29.6	only high risk tested	3rd Intl AIDS Conf Abstracts, 1987, HP.85, p24
		86-87	prenatal	88	21.6	"	J Johnson, Univ MD, pers com
		87	fam plan	693	0.9		J Modlin, J Hopkins Univ, pers com
MI	Detroit	86-87	pregnant drug users	170	9.4	primarily IV drug users	C Meriwether, Wayne State Univ, pers com
NC	Statewide	87	prenatal	200	0.0		D Jolly, NC Hlth Dept pers com
	Statewide, rural	87	fam plan	200	0.0		"
NY	Bronx	87	abortion	351	2.6		Ann Int Med, 1987;107:599

*fam plan = family planning clinic

Continued...

Table 6 (Continued)

STATE	CITY	YEAR	TYPE OF CLINIC*	NO. TESTED	PERCENT POSITIVE	REMARKS	REFERENCE
NY	Bronx	87	hospital (Beta-HCGS)	820	2.4		E Schoenbaum, Am Publ Hlth Assoc meetings, 1987, Late Breaker Session
	Brooklyn	86-87	delivery	602	2.0		S Landesman, J Am Med Assoc, (in press)
		86-87	prenatal	255	5.9		"
	NYC	86-87	delivery	1,192	2.3	Haitian	K Krasinski, NYU Sch Med, pers com
PA	Pittsburgh	86-87	fam plan	191	0.0		R Valdessarri, Univ Pittsburgh, pers com
PR	San Juan	86-87	delivery	1,036	1.7		C Zorilla, Univ PR Med Sch, pers com
		87	prenatal	2,633	1.7		"
WI	Central WI	86	prenatal	1,000	0.0		P Meier, Marshfield Clinic, pers com

*fam plan = family planning clinic

Table 7

HIV ANTIBODY PREVALENCE IN PRISONERS
AVAILABLE SURVEYS AND STUDIES 1984-1987

STATE	YEAR	INMATE GROUP	SEX	SAMPLING	NO. TESTED	PERCENT POSITIVE	REFERENCE
AL	87	IV drug users		consecutive	400	1.7	R Bradford, AL Dept Correction, pers com
CA	85	IV drug abusers,	F	nonbl/vol	62	1.6	M Wilker-Willi, Dept of Hlth, Santa Ana, CA, pers com
	85-87	2/3 are prostitutes	F	nonbl/vol	774	3.6	"
	87	heterosexual IV drug users	F	nonbl/vol	318	2.2	C Perkins, AIDS Program, CA Hlth Dept, pers com
	87	IV drug users	M	nonbl/vol	281	0.7	"
	87	homosexual IV drug users	M	nonbl/vol	13	15.4	"
	87	heterosexual IV drug users		nonbl/vol	44	13.6	"
	87	IV drug users		nonbl/vol	366	0.8	"
	87	various		vol	500	1.8	T Hammett, Abt Assoc, Natl Inst of Justice, pers com
	86(?)	IV drug users		bid/con	611	1.4	F Capell, CA Hlth Dept, pers com
CO	85-87	all new inmates		consecutive	2847	0.5	T Hammett, Abt Assoc, Natl Inst of Justice, pers com
CT		current inmates	F	nonbl/vol	400	10.0	E Wurzel, CT Dept of Corrections, pers com
		many are iv drug users					
	85-87	current inmates	M	nonbl/vol	1500	10.0	"
		many are iv drug users					
IA	86	all new inmates		consecutive	800	0.0	T Hammett, Abt Assoc, Natl Inst of Justice, pers com
ID	87	all new inmates		consecutive	163	0.0	"
MO	85	incarcerated	M(?)	vol	137	1.5	MMR 1986;35:195-199
		over 6 years					
	85	all new inmates	M	consecutive	748	6.9	F Brewer, MO Dept of Corrections, pers com
	85	all new inmates	F	consecutive	35	17.1	"
MI	86	all new inmates		consecutive	457	0.9	T Hammett, Abt Assoc, Natl Inst of Justice, pers com

* bid = blinded (anonymous), con = consecutive, nonbl = nonblinded, vol = voluntary

Continued...

Table 7 (Continued)

STATE	YEAR	INMATE GROUP	SEX	SAMPLING	NO. TESTED	PERCENT POSITIVE	REFERENCE
MI	86-87	all new inmates	M	bld/con	714	0.7	J Kotsanas, MI Dept of Hlth, pers com
	86-87	all new inmates	F	bld/con	57	1.7	"
NE	87	new inmates		blinded	571	0.9	T Hammett, Abt Assoc, Natl Inst of Justice, pers com
	85	all new inmates		consecutive	2638	0.3	"
NE	85	all current inmates		consecutive	3820	2.5	"
NE	87	all new inmates		consecutive	812	0.2	"
NE	87	"high risk groups"		vol	127	0.0	"
NV	86-87	all current inmates		consecutive	9841	1.8	R Nellis, AIDS Program, Carson City, NV, pers com
SD	86	all current inm	M & F	multiple	1105	0.2	K Senger, SD Hlth Dept, pers com
SD	86	all new inmates		consecutive	427	0.2	T Hammett, Abt Assoc, Natl Inst of Justice, pers com
SD	86	all current inmates		consecutive	1124	0.2	"
SD	86-87	all new inmates	M & F	consecutive	893	0.1	K Senger, SD Hlth Dept, pers com
WA	87	routine testing	M & F	blinded	342	0.0	J Jourdan, Seattle-King Co Hlth Dept, pers com
WI	86	all new inmates	M	bld/con	997	0.3	H Frisbee, WI Hlth Dept, pers com
WV	87	existing inmates			300	0.7	T Hammett, Abt Assoc, Natl Inst of Justice, pers com

* bld = blinded (anonymous), con = consecutive, nonbl = nonblinded, vol = voluntary

in prostitutes in the United States was recently summarized, (CDC, 1987). HIV prevalence was 3 to 4 times higher in prostitutes who acknowledged IV drug use than in those who did not. HIV prevalence tended to parallel the geographic pattern of AIDS case incidence in women, and HIV prevalence was over twice as high in black and Hispanic prostitutes as in white and other prostitutes (see section V.D).

The available seroprevalence data on female prostitutes (Table 8) vary from 0% to 45%, with highest rates seen in large inner-city areas where IV drug use is common. The relative importance of IV drug use versus sexual exposure as the mode of infection for these women cannot be determined from this review. Regardless of how they acquired their infection, female prostitutes represent a potential source of infection to their male clients, at least in some areas of the country.

- C. Tuberculosis Patients. Clinical tuberculosis (TB) can occur as an opportunistic disease in HIV-infected persons who are infected with the tubercle bacillus. For the first time in recent history, TB incidence has risen, most prominently in areas of the country with high levels of HIV infection. Therefore, HIV-infected persons may increasingly be found in clinics treating TB patients. In the one study that was not limited to self-selected groups, 19% of 276 TB patients in Dade County, Florida, were infected with HIV (D. Fertel, Pulmonary Division, Jackson Memorial Hospital, personal communication). In four other studies of TB patients individually considered at high risk, the HIV seroprevalence ranged from 0% to 50%.

The implications of the HIV prevalence in TB clinics relate more to the clinical management of TB patients and the control of tuberculosis in the community than to HIV levels in that community. The high HIV prevalence observed thus far among TB patients reemphasizes the CDC TB/HIV recommendations that TB patients be tested for HIV and that HIV-positive persons be tested for TB (CDC, 1986). TB clinics provide a good setting for AIDS health education and risk-reduction, since TB patients are seen frequently over extended periods of time. CDC is supporting State and local health departments in rapidly expanding the number of serologic surveys in TB clinics to assess the local prevalence of HIV in TB patients and the consequent need for public health interventions.

- D. College Students. College students represent selected subgroups of the general population, limited in age range and socioeconomic level. No restriction generally applies in terms of sexual orientation or hemophilia; however, actively addicted IV drug users are presumably under-represented. Determining the HIV prevalence in student populations is important because of the focused health education and risk-reduction needs and opportunities which exist in the college setting. No survey data are currently available from

Table 8

HIV ANTIBODY PREVALENCE IN FEMALE PROSTITUTES
AVAILABLE SURVEYS AND STUDIES 1984-1987

STATE	CITY	YEAR(S)	SETTING	NO. TESTED	PERCENT POSITIVE	REMARKS	REFERENCE
CA	Los Angeles Orange County San Francisco	86-87	incarcerated	239	4.2		W Darrow, Multicent Collab Study, CDC, pers com
		85-87	incarcerated	1286	3.5	IV drug users	PS Gill, 2nd Intl AIDS Conf, 1986, and pers com
		85-87	outreach	159	6.3		C Wofsy, Univ CA San Francisco, pers com
		86-87	outreach	220	4.6		W Darrow, Multicent Collab Study, CDC, pers com
CO	Col. Springs Denver	86-87	STD clinic	96	1.0		"
		85	STD clinic	44	4.5		ICAAC, 1986, Abstracts, no 1025, p 285
		85-87	incarcerated	306	0.7		D Cohn, Denver Hlth Dept., pers com
FL	Dade County South Florida	86-87	incarcerated	489	14.5		W Darrow, Multicent Collab Study, CDC, pers com
		86(?)	community	90	41.1	inner city	3rd Intl AIDS Conf, 1987, Abstracts, W.2.2, p 105
		86(?)	community	25	0.0	escort service	"
		86-87	outreach	122	0.8		W Darrow, Multicent Collab Study, CDC, pers com
GA	Atlanta	86-87	outreach	65	13.8		H Hill, Detroit Dept of Hlth, pers com
MI	Detroit	86	outreach	38	0.0		R Smith, MS State Hlth Dept, pers com
MS	Jackson	87	outreach	37	2.7		R Miller, San Juan STD Control Prog, pers com
PR	Islandwide	86-87	outreach	181	45.3	predominantly IV drug users	W Darrow, Multicent Collab Study, CDC, pers com
NJ	Several cities	86-87	drug treatment center	38	0.0	registered brothel workers	"
NV	Las Vegas	86-87	STD clinic	77	14.3		3rd Intl AIDS Conf, 1987, Abstracts, THP.55, p 172
NY	NYC	85-87	outreach	68	1.5		M Seidlin, Bellevue Hosp, pers com
NY	NYC	86-87	outreach	76	0.0		L Baddoun, Memphis Hlth Dept, pers com
TN	Memphis	85-86	incarcerated				

college populations. CDC is initiating a group of serologic surveys and studies at selected campuses in collaboration with health care providers for those campuses.

V. Geographic and Demographic Aspects of Infection Prevalence

- A. Geography. The distribution of both AIDS cases and HIV prevalence varies substantially by geographic area. Figures 3 and 4, respectively, show the cumulative AIDS incidence rates per 1,000,000 population by State for AIDS cases as a whole and for cases in heterosexual adults and adolescents only. Figures 5 and 6, respectively, show observed HIV antibody prevalence in military applicants (adjusted by sex) and in blood donors (unadjusted rates). The general geographic correlation between AIDS incidence and HIV prevalence is obvious, suggesting that case data, which are routinely reported with a high level of completeness (Hardy et al, 1987; Starcher et al, 1987), still remains a useful indicator of geographic distribution of infection.

The geographic correlation between AIDS case incidence and HIV prevalence in military applicants was demonstrated statistically based on the first 6 months data from applicant screening (Burke et al, 1987). The same study demonstrated that HIV prevalence in military applicants is disproportionately higher in urban areas than in rural areas, similar to the striking urban predominance in HIV prevalence in childbearing women in Massachusetts (see III E, above). The same pattern is seen with AIDS cases, where incidence of disease is much higher in urban compared with rural populations (CDC, unpublished data).

The geographic distribution of HIV infection differs among the specific risk groups. Figure 7 maps selected seroprevalence data from Tables 1, 2, and 3. Data for hemophiliacs (hemophilia A) indicate similar high levels of infection regardless of area. The levels vary in homosexual and bisexual men, with highest levels observed in California and the Northeast and with somewhat lower levels elsewhere. HIV prevalence in IV drug users varies widely, being highest in the vicinity of New York City and in Puerto Rico, moderately high elsewhere on the East Coast and in California and generally below five percent in most other areas of the country.

- B. Age. HIV infection prevalence like AIDS cases is at present largely a phenomenon of persons in the sexually active and IV-drug-using age range. This age distribution is repeatedly observed in populations where age-specific data are available (Figure 8). Other than in young children (for whom sufficient data are not yet available), HIV infection first becomes appreciable in the mid to late teens, increases rapidly into the late 20s and early 30s, where it peaks, then declines in the 40s and 50s. Of significance, the age distribution of AIDS cases is roughly parallel to the HIV prevalence in the population-based groups (military applicants and sentinel hospital patients), following the rise, peak, and fall of HIV prevalence rates by five or more years.

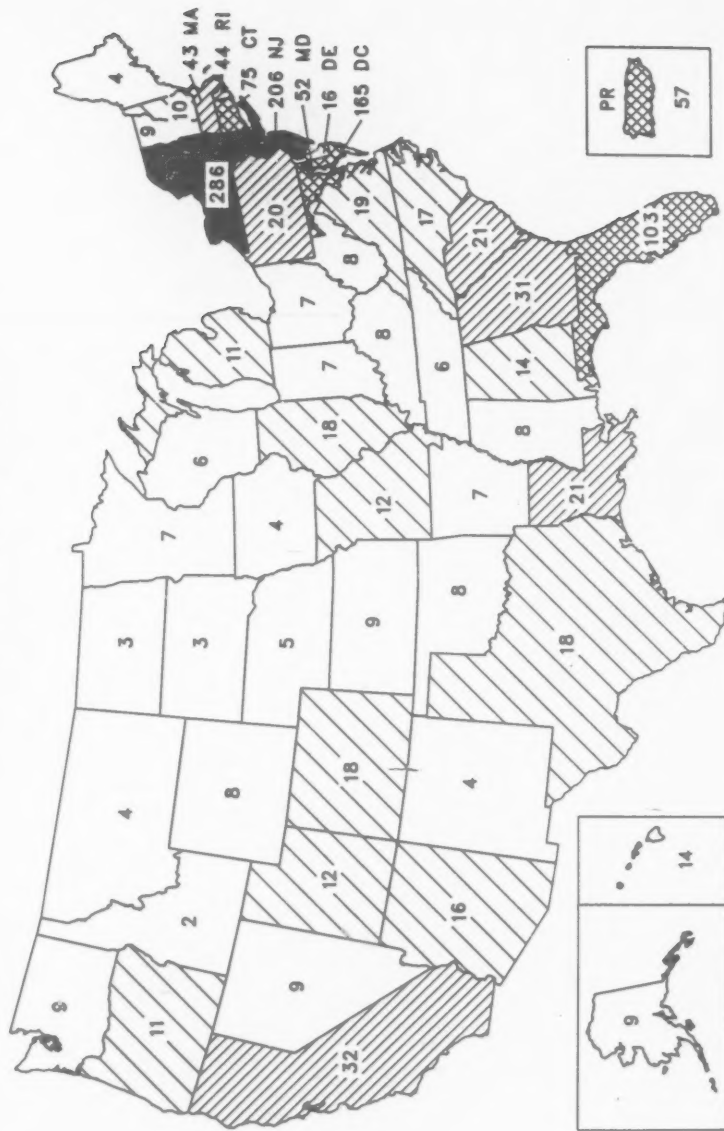
Incidence of AIDS Cases by State, Per Million Population
as of November 2, 1987

Figure 3



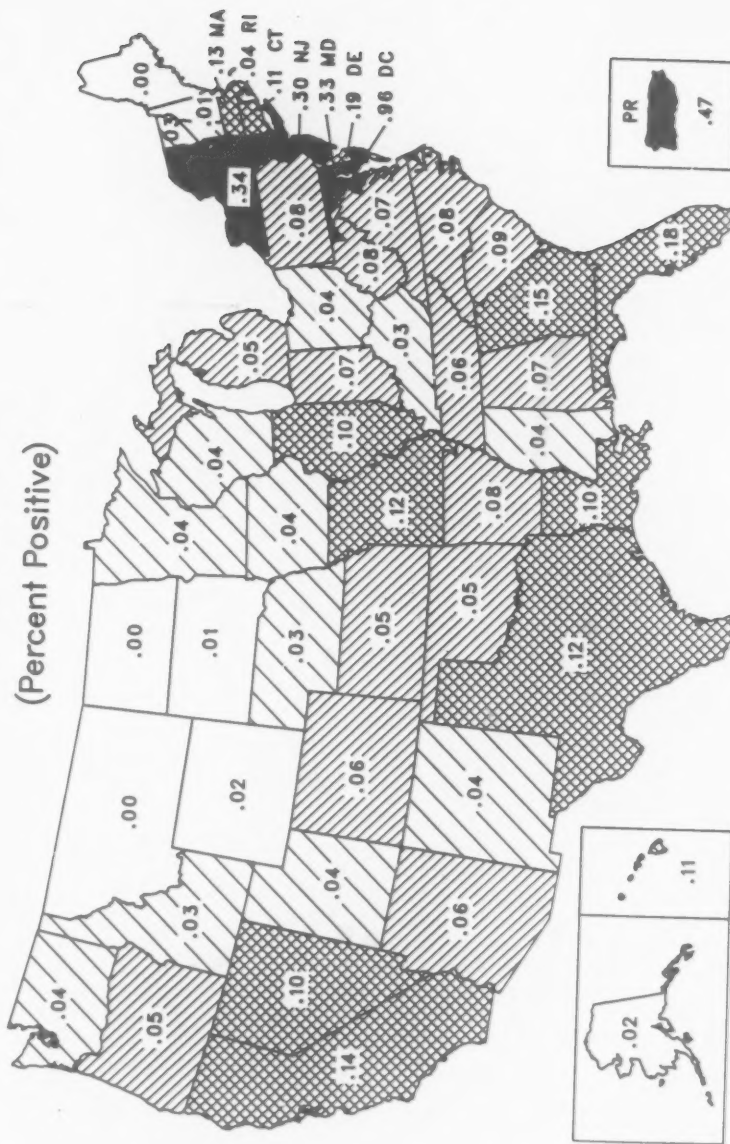
FIG. 2-4

Incidence of AIDS Cases by State, Per Million Population
Heterosexual Adults and Adolescents* (Age ≥ 15 Years)
as of November 2, 1987



* Adults and adolescent patients excluding homosexual and bisexual men

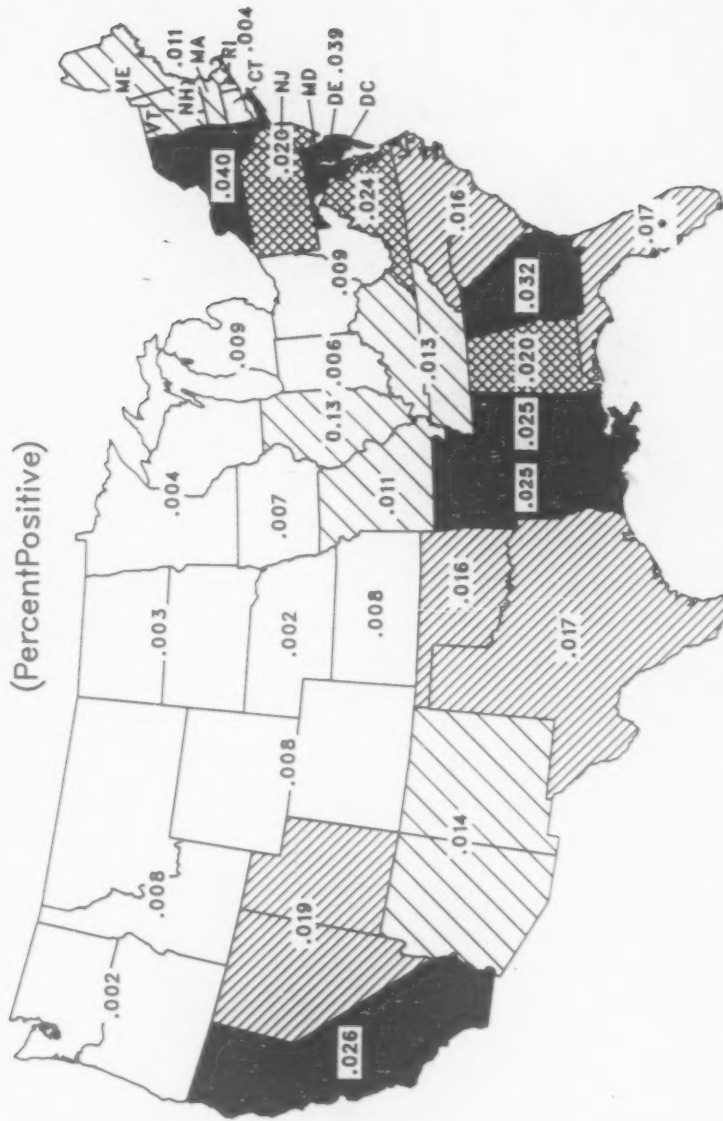
Figure
Prevalence of HIV Antibody in Military Recruit Applicants
Sex-Adjusted for Population of Age 17-59 Years, by State
10/85 - 9/87



Source: Department of Defense

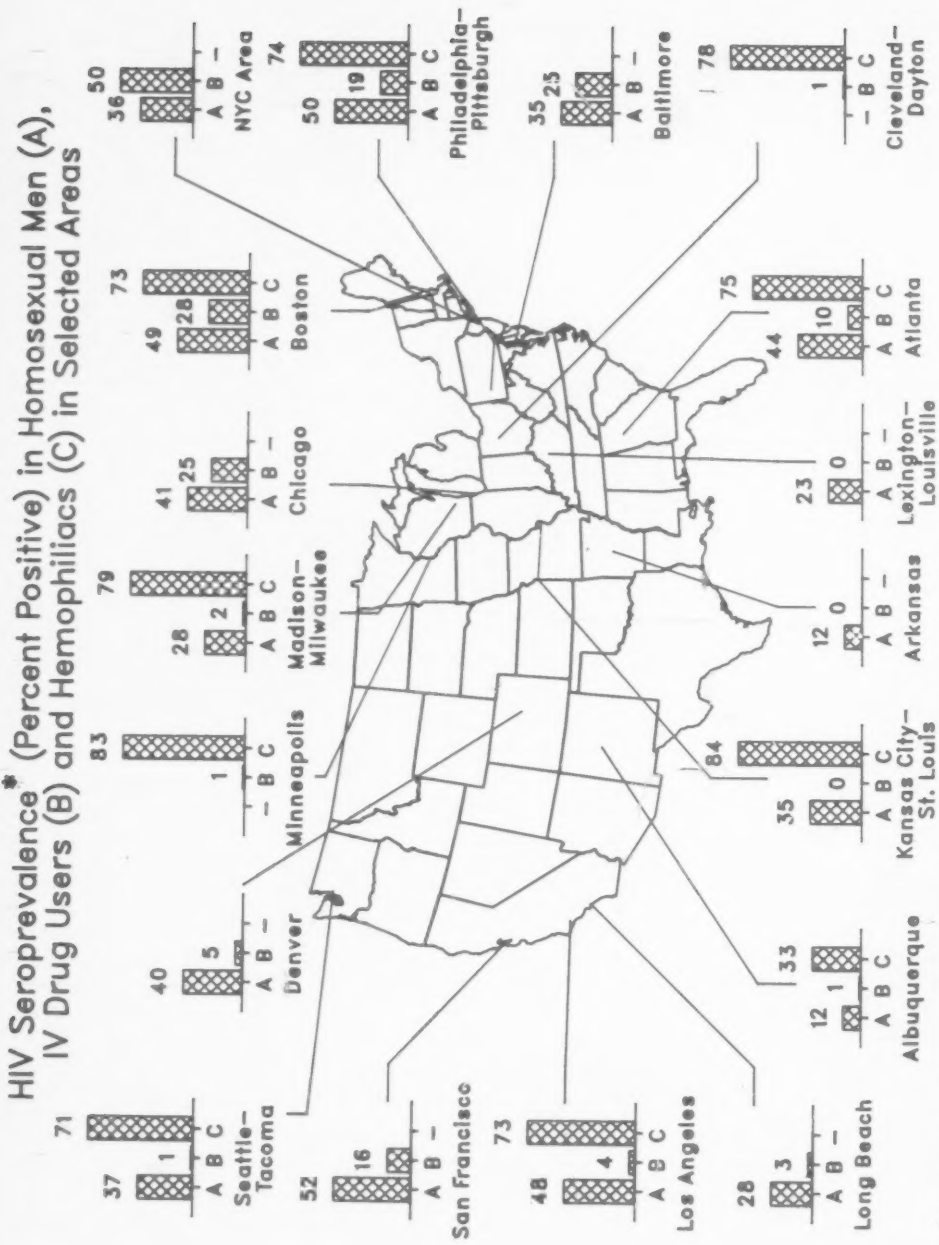
Fig. 6

Prevalence of HIV Antibody in Blood Donors
Combined Data from Adjacent Centers
7/86 - 6/87



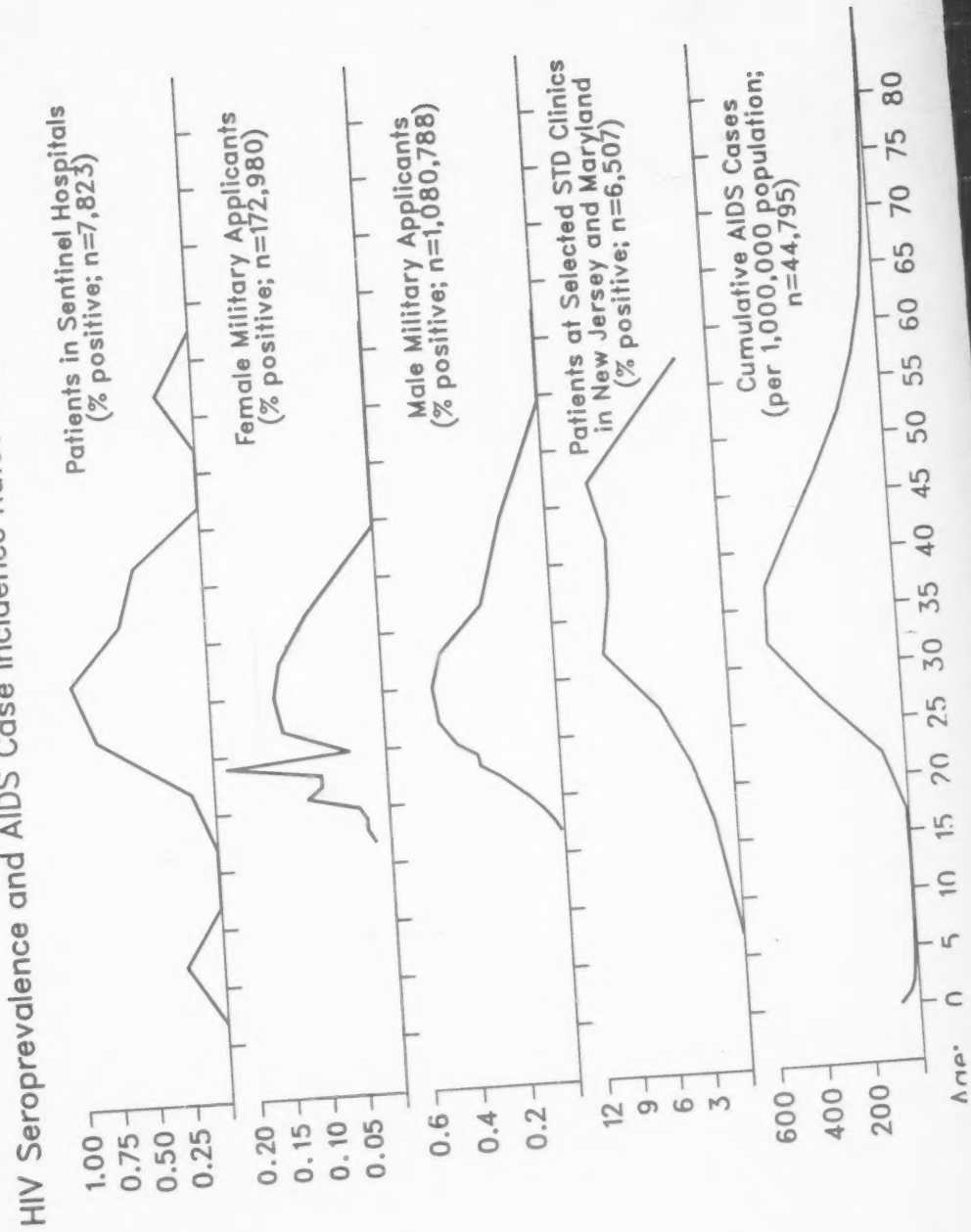
Source: American Red Cross, Council of Community Blood Centers. * FL; Excludes So. Florida

Figure 4



* Approximate averages from multiple recent studies.

Figure 8
HIV Seroprevalence and AIDS Case Incidence Rates in Selected Samples, by Age



Because of the marked difference in HIV prevalence by year of age in young adults, the age composition of groups surveyed for HIV will have a major impact on the net observed prevalence. For this reason, where feasible, it is important to age-adjust or stratify prevalence data from survey populations that are not randomly selected from all age groups in order to compare the data with prevalence data from other groups.

- C. Sex. The cumulative incidence of AIDS cases per million population is 13.0 times greater for males than for females. For AIDS cases in heterosexual adults and adolescents the ratio is 2.9 to 1, males to females (Table 9). Similarly, for HIV infection this male-to-female predominance is found in military applicants (5.5 to 1), blood donors (4.6 to 1), and in sentinel hospital patients (2.3 to 1) (An earlier analysis of military applicants (Burke et al, 1987) gave a male-to-female prevalence ratio of 2.7 to 1; however, this was based on crude rates rather than the corrected rates cited here). By contrast, in the one principal risk group which includes women, IV drug users, the prevalence does not differ appreciably by sex. The male-to-female ratio appears to vary geographically, at least for military applicants (Burke et al, 1987), with ratios approaching 1 to 1 (based on small numbers of women tested) in major city areas. It is unclear whether this low ratio reflects high rates of self-exclusion from the military by homosexual men, high background rates of IV-drug-use-associated HIV infection or heterosexually acquired infection in these areas, or a combination of these. The magnitude of the male-to-female predominance of infection in the general population groups probably depends on the relative proportion of homosexual and bisexual men to IV drug users and others in the particular group surveyed.
- D. Race and Ethnicity. The cumulative incidence of AIDS cases is disproportionately high in blacks (3.0 to 1) and Hispanics (2.6 to 1) compared with whites (Table 10). When cases in homosexual and bisexual men are excluded, the ratio of AIDS case incidence is 12.0 to 1 for blacks, and 9.3 to 1 for Hispanics as compared to whites. This racial/ethnic disproportion in HIV prevalence is similarly observed in blood donors, military applicants, and sentinel hospital patients (Table 10). Even in homosexual and bisexual men and in IV drug users, where race/ethnic-specific data are available blacks appear to have higher HIV prevalence rates than whites. Hispanics appear to have higher HIV prevalences among IV drug users than do whites. In a large multicenter study of female prostitutes (CDC, 1987), black and Hispanic prostitutes had a higher HIV prevalence (15.4%) than did white and other prostitutes (6.7%), with a ratio of 2.3 to 1. This racial and ethnic disproportion existed both for prostitutes who used IV drugs (2.5 to 1) and for those who did not acknowledge IV drug use (3.3 to 1).

The reasons for this recurring racial disproportion of infection, whether behavioral or biologic, are not yet apparent. The higher

Table 9

COMPARISON BY SEX OF AIDS CASE INCIDENCE RATES AND HIV SEROPREVALENCE RATES: SELECTED RECENT DATA					
GROUP	STATISTIC	DATA SOURCE	RATES FOR MALES	RATES FOR FEMALES	RATIO OF RATES MALES:FEMALES
All AIDS cases	cumulative incidence per 1,000,000 population ¹	CDC data through 10/19/87	350	27	13.0 to 1
Metrosexual adult & adolescent AIDS cases	cumulative incidence per 1,000,000 population ¹	CDC data through 10/19/87	73	25	2.9 to 1
Military recruit applicants	seroprevalence in percent ²	Dept of Defense, Oct 85-Sept 87	0.2399	0.0438	5.5 to 1
Am Red Cross blood donors nationwide:	seroprevalence in percent	R Dodd, Am Red Cross, pers com, Jan 86- Mar 87			
First-time donors			0.0692	0.0152	4.6 to 1
Repeat donors			0.0189	0.0041	4.6 to 1
Sentinel hospital patients in Midwest	seroprevalence in percent	CDC, unpub data	0.41	0.18	2.3 to 1
IV drug users	seroprevalence in percent	NYC, 1985, J Am Med Assoc 1987;11:1474-5	54	59	0.9 to 1
		CT, 4 cities, 1986-87; L Petersen, Ct Hlth Dept & CDC, pers com	25	20	1.2 to 1

¹ 1985 Census estimate data used for sex-specific AIDS incidence data

² Age- and race-adjusted to the U.S. population 17-59 years of age

Table 10

COMPARISON BY RACE OF AIDS CASE INCIDENCE RATES
AND HIV SEROPREVALENCE RATES SELECTED RECENT DATA

GROUP	STATISTIC	DATA SOURCE	RATE FOR WHITES	RATE FOR BLACKS	RATIO OF RATES BLACKS:WHITES	RATE FOR HISPANICS	RATIO OF RATES HISPANICS:WHITES
All AIDS cases	cumulative incidence per 1,000,000 population ¹	CDC data through 10/19/87	149	422	3.0 to 1	390	2.6 to 1
AIDS cases excluding homosexual and bisexual men	cumulative incidence per 1,000,000 population ¹	CDC data through 10/19/87	18	217	12:1 to 1	168	9.3 to 1
Military recruit applicants	seroprevalence ² in percent	Dept of Defense, Oct 85- Sept 87	0.0737	0.5093	6.9 to 1	0.2178	3.0 to 1
Blood donors in 3 regions	seroprevalence in percent	J Ward, CDC, & A Williams, Am Red Cross, pers com	0.025	0.291	11.6 to 1	0.083	3.0 to 1
Sentinel hospital patients in Midwest	seroprevalence in percent	CDC, unpub data	0.17	0.52	3.1 to 1	NA	

¹ 1980 Census data for US, by race and ethnicity used for race-specific AIDS incidence data² Age- and sex-adjusted to the U.S. population 17-59 years of age

Continued...

Table 10 (Continued)

GROUP	STATISTIC	DATA SOURCE	RATE FOR WHITES	RATE FOR BLACKS	RATIO OF RATES BLACKS:WHITES	RATE FOR HISPANICS	RATIO OF RATES HISPANICS:WHITES
Homosexual & bisexual men	seroprevalence in percent	DeKalb Co, GA, 1987; R Poole, DeKalb Co Dept of Hlth, pers com	33	55	1.7 to 1	NA	
		Baltimore, MD, 1987; R Cannon, J Hopkins Univ & CDC, pers com	12	41	3.4 to 1	NA	
		MA, statewide, 1987; J Day, MA Dept of Hlth, pers com	19	58	3.1 to 1	18	0.9 to 1
		NYC, NY, 1986; WR Lange, Am J Pub Hlth in press	37	63	1.7 to 1	62	1.7 to 1
IV Drug users	seroprevalence in percent	Baltimore, MD, 1986; WR Lange, Am J Pub Hlth, in press	9	45	5.0 to 1	NA	
		CT, 4 cities, 1986-87, L Petersen, CT Hlth Dept & CDC, pers com	11	56	5.1 to 1	36	3.3 to 1

1 1980 Census data for US, by race and ethnicity used for race-specific AIDS incidence data

2 Age- and sex-adjusted to the U.S. population 17-59 years of age

rate of IV drug use among black and Hispanic groups, with consequent greater risk of HIV exposure, is clearly a contributing factor. However, this may not be the only factor since even in IV drug users the racial disproportion of infection prevalence is found.

VI. Infection Prevalence in Heterosexuals Without Acknowledged High-Risk Exposure

Considerable concern has been expressed about the level of HIV transmission among heterosexually active persons in the absence of other known risk factors in either partner. Currently, the prevalence of HIV infection in such persons remains very low on a national basis compared with persons with specific risk behavior or known sexual exposure to persons at increased risk.

In military applicants and blood donors, trends in heterosexually acquired infection can be monitored through interview of seropositives because the background rates of high-risk-behavior-associated infection are lower than are found in the otherwise comparable segments of general population.

Thus far, two small studies are available in which seropositive military applicants were interviewed to evaluate risk exposures. In New York City, 83% of 24 seropositive applicants who sought counseling through the health department had recognized risk factors, particularly homosexual or bisexual exposure or drug abuse (Stoneburner et al, 1986). In Colorado, 11 (92%) of 12 such individuals similarly had risk factors (B. Dillon, N. Spencer, Colorado State Health Department, personal communication). In a slightly different population, seropositive active duty military personnel, the El Paso County, Colorado, Department of Health found 91% of 33 interviewed men had recognized risk factors (Potterat et al, 1987; El Paso County Health Dept, personal communication). Too few seropositive women were available in any of the follow-up studies for analysis. The Department of Defense, in collaboration with CDC and with and State and local health departments, is developing a program of more consistent interview evaluation of risk factors among seropositive applicants. It is expected that heterosexual transmission is most likely to occur in those areas with highest rates of HIV infection and AIDS in IV drug users.

Among blood donors, follow-up interviews of seropositive individuals have found a high proportion with recognized HIV risk factors. In a study in Los Angeles, Baltimore and Atlanta, 82% of 186 seropositive donors studied thus far have risk factors (J. Ward, CDC, unpublished data), as did 86% of 118 seropositives in three Red Cross regions (A. Williams, American Red Cross, unpublished data) and 89% of 109 in the New York city area (P.D. Cleary, New York Blood Center, unpublished data). CDC is collaborating with blood collection agencies and State health departments to develop a network of at least 20 centers where systematic evaluation of risk factors among seropositive donors is conducted.

If the additional planned studies are consistent with these observations, this suggests that as few as about 15% of currently infected military applicants and blood donors may have acquired their infection heterosexually. This corresponds with an estimate of heterosexually acquired infection of 0.021% for applicants (sex-, race- and age-adjusted) and 0.006% for donors. More follow-up interview studies are needed in HIV-positive persons from these groups.

Another approach to monitoring for heterosexually-acquired infection is measuring the HIV prevalence in patients in STD clinics who through interview are carefully determined not to have standard sexual, IV-drug-, or blood- or blood-product-related risk factors. STD clinics see heterosexuals whose sexual behavior puts them at highest risk of HIV as well as other sexually transmitted infections. Thus, exclusively heterosexual, non-IV-drug-using patients at STD clinics make up the most likely subpopulation of heterosexuals in which to observe HIV infection, and HIV prevalence in such patients should represent the highest prevalence for non-IV-drug-using heterosexuals in a given geographic area. In nine surveys in six major cities, where HIV risk was evaluated rigorously through interview with the opportunity for reinterview of seropositives, infection prevalence ranged from 0 to 1.2% percent in persons without identified risk factors (Table 11). Where risk was evaluated less rigorously through an anonymous self-administered questionnaire, a prevalence as high as 2.6% was observed in persons not acknowledging risk. In simultaneous surveys of homosexual patients at these same clinics, the HIV prevalence ranged from 35% to 55%. CDC is collaborating with State and local health departments to widely expand the serosurveys in STD clinics, including the rigorous evaluation of HIV risk factors in heterosexual patients.

VII. Infection Trends Over Time, Incidence of New Infection

Trend and incidence information is much less available and much more difficult to develop than prevalence data. Prevalence trends can currently be observed in large groups that routinely have been screened for at least 2 years, namely military applicants and blood donors. The other regularly screened general population groups, sentinel hospital patients and Job Corps entrants, have not yet been evaluated for long enough to permit a meaningful analysis. Incidence, or the rate of new HIV infection, is measured directly in groups in which the same persons are tested more than once. Currently these groups include active duty military personnel, repeat blood donors, and recruited cohorts of persons at increased risk.

In the first 24 months of serologic testing of military applicants, the HIV infection prevalence has remained stable, with no statistically significant trend upward or downward (Figure 9) for applicants as a group or when analyzed by sex, age group, race or ethnicity (Figure 10), or geographic region. These trend data should be viewed with some caution. Progressively increasing rates of self-deferral of persons knowing or suspecting they were infected might have masked an increase

Table 11

HETEROSEXUALS AT STD CLINICS NOT ACKNOWLEDGING RISK FACTORS
FOR HIV* ON INTERVIEW OR QUESTIONNAIRE
AVAILABLE SEROPREVALENCE STUDIES

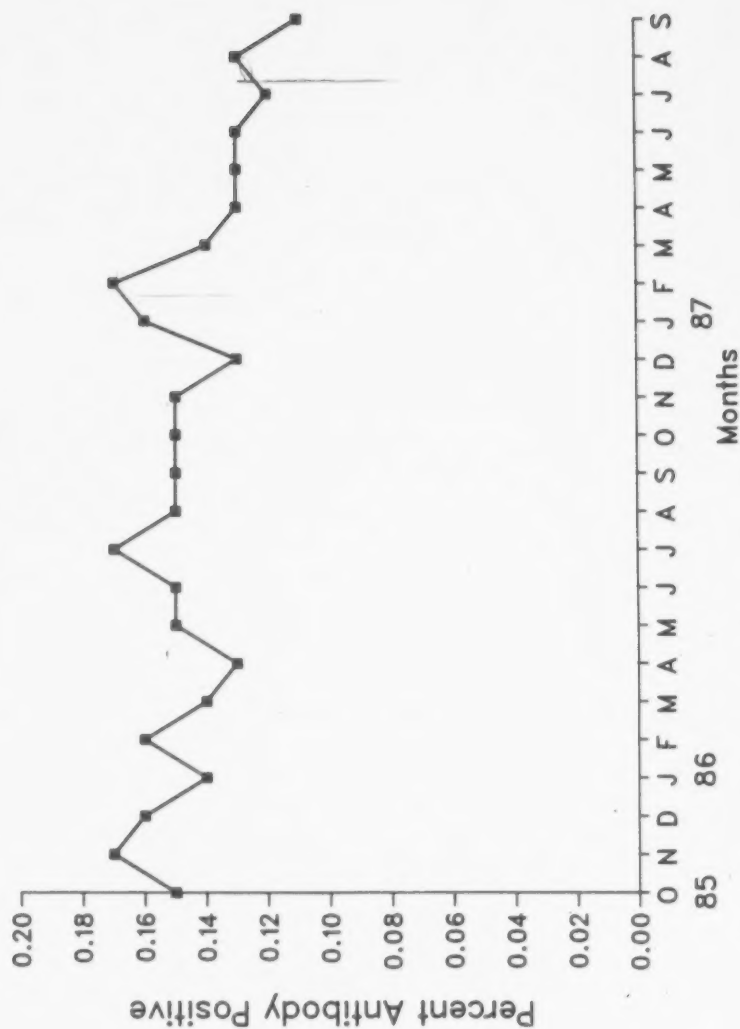
STATE	CITY	YEAR	NO. TESTED	PERCENT POSITIVE	SEX	ASCERTAINMENT METHOD	REFERENCE
AR	Statewide	87	383	0.8	M & F	interview, positives reinterviewed	D Smith, AR Dept of Hlth, pers com
CA	San Diego	87	301	1.0	M	interview	M Ginsberg, San Diego Dept of Hlth Svcs, pers com
		87	174	1.1	F	"	
CO	Denver	85	229	0	M	interview,	D Cohn, Denver Hlth Dept, pers com
		85	111	0	F	positives	"
		86	361	0.3	M	reinterviewed	"
		86	222	0	F	"	"
		87	374	0.3	M	"	"
		87	255	0	F	"	"
FL	Jackson- ville	87	260	0.4	F	interview, positives reinterviewed	A Kaunitz, J Am Med Assoc, (in press)
MD	Baltimore	87	1519	2.6	M	anon. self- administered questionnaire, no reinterview of positives	R Cannon, J Hopkins Univ & CDC, pers com
		87	1005	1.6	F	"	"
NY	NYC	86-87	415	1.2	M	interview- most positives	M A Chiasson, NYC Hlth Dept, pers com
		86-87	191	0.5	F	reinterviewed	"
WA	Seattle	86	208	0	M	interview	H Handsfield, R Wood, Seattle-King Co. Dept of Hlth, pers com
		86	123	0	F	"	"
		87	197	0	M	"	"
		87	97	0	F	"	"

*homosexual/bisexual contact, IV drug use, hemophilia, known sexual contact with person from these groups

Figure 9

HIV Antibody Prevalence in Military Recruit Applicants

N=1,253,768



Source: Department of Defense

in prevalence in the population from which military applicants are drawn. However, the available data do not suggest an explosive rise in infection in the population from which applicants are drawn, nor do they indicate that new infection has stopped occurring.

Seroprevalence in Red Cross blood donors as a group has progressively declined from an initial 0.035% in mid-1985 to 0.012% in July 1987 (Figure 11). However, this is due to the progressive elimination from the repeat donor pool of persons who had previously tested positive. Data obtained only from first-time donors indicate a prevalence that varies seasonally but over a 24-month period has shown neither an upward nor a downward trend (Figure 12). The peak in seroprevalence seen in mid-summer corresponds with the seasonal change in the composition of the donor pool. In mid-summer, student donors are not available and the remaining donors tend to be older and drawn more heavily from workforce groups (R. Dodd, American Red Cross, personal communication). Similar mid-summer peaks were observed for hepatitis B surface antigen among blood donors from 1975 through 1977 (Dodd et al, 1982). Hepatitis B virus shares many epidemiologic characteristics with HIV.

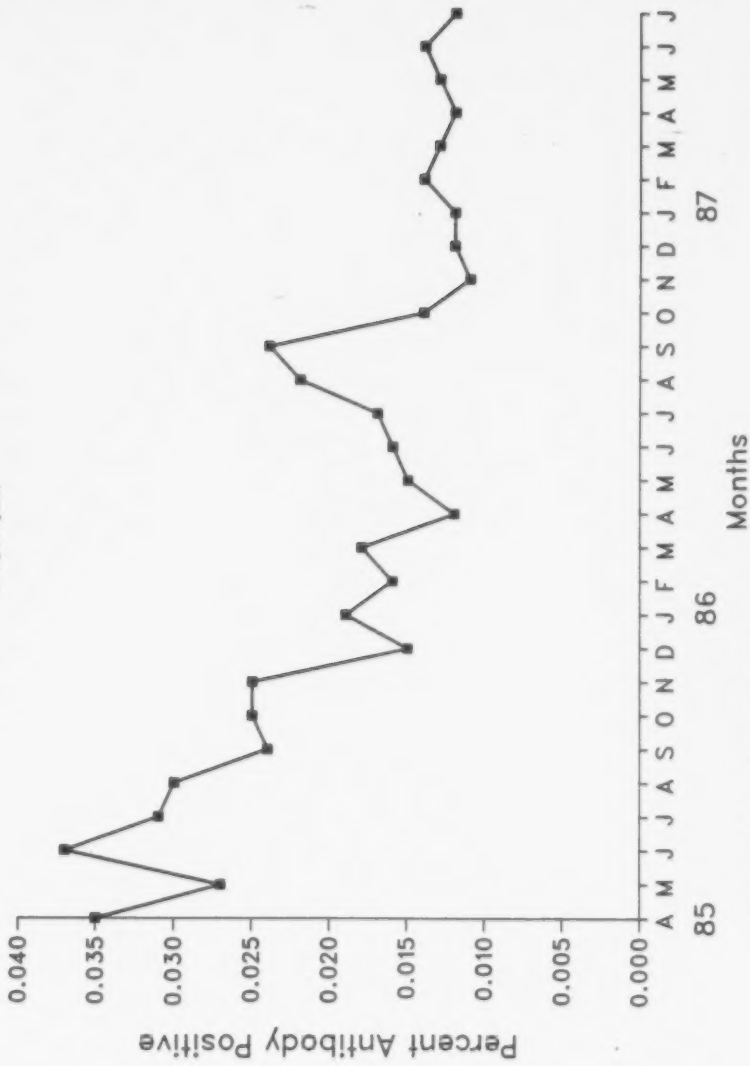
Stable observed prevalence levels do not imply absence of new infection. On the contrary, the age-specific data from military applicants, where for example, 20-year-olds in early 1987 have higher rates than 19-year-olds in early 1986, suggest that new infection continues to occur. Preliminary analysis by birth-year cohort for applicants 17 to 25 years of age suggests incidence rates for new infection of 0.5 per 1,000 per year for men and 0.15 per year for women (J. Brundage, Walter Reed Army Institute of Research, personal communication). Among 132,920 active duty military personnel who have been serologically tested more than once, the preliminary rate of 0.77 new infections per 1,000 persons per year (0.077%) has been observed (J. McNeil, Walter Reed Army Institute of Research, personal communication). Among over 3 million donors whose blood has been tested more than once in the American Red Cross system, new infections are also currently observed at the preliminarily estimated rate of 0.003% per year (R. Dodd, American Red Cross, personal communication).

While evidence from screening military applicants and personnel and blood donors indicates that new infections continue to occur, several sources of information suggest that the rate of new infection (incidence) may have slowed from previous years at least in some groups. First, data from eight cohorts of homosexual and bisexual men show progressive declines in the rate of new infection (Table 12, Figure 13). Nevertheless, although lower than in the early 1980s, these rates remain appreciable. Second, the previous incidence of new infection was high enough to raise the net seroprevalence in blood donors and military applicants respectively from the original zero level to their current levels. However the incidence of new infection may no longer be high enough to continue to raise the net prevalence levels, which have remained stable during the last two years. Third, due to the behavioral and serological screening of blood and plasma

Figure 11

Prevalence of HIV Antibody in Blood Donors April 1985 - July 1987

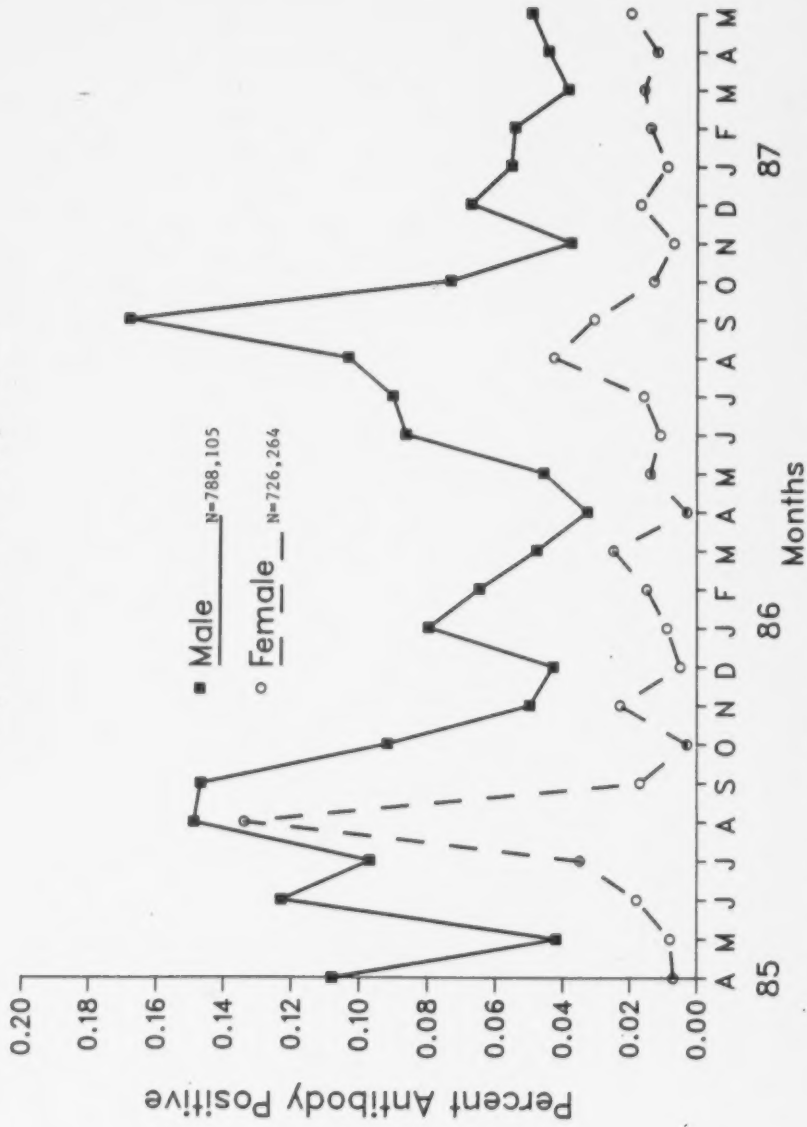
N=9,671,411



Source: American Red Cross

Figure 12

Prevalence of HIV Antibody in First-Time Blood Donors April 1985 – May 1987



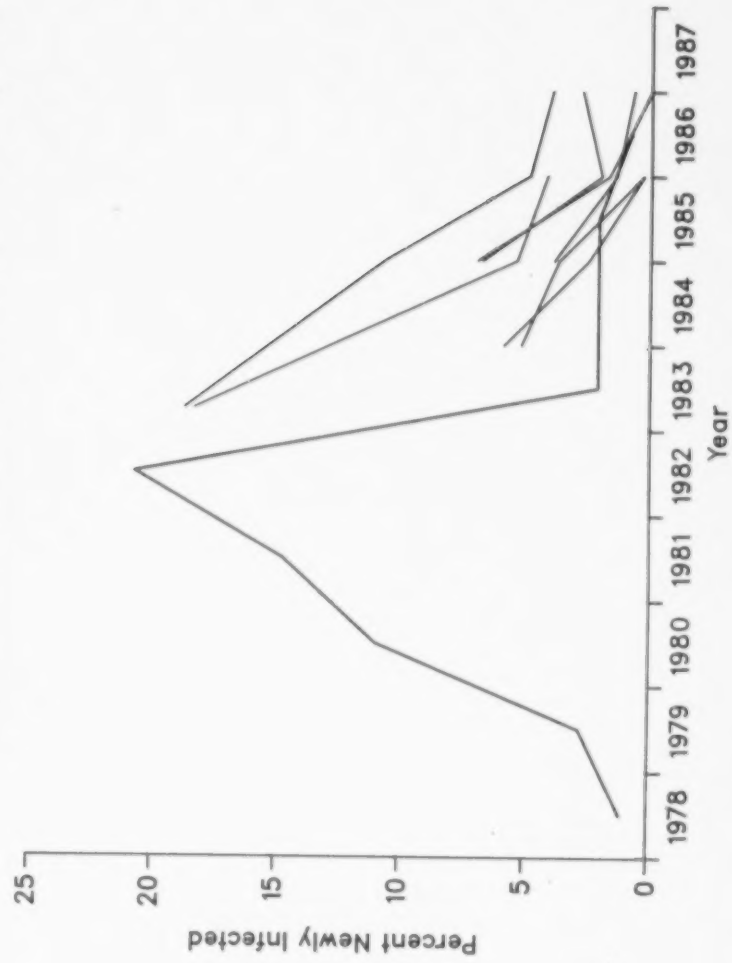
Source: American Red Cross, centers with data available since April of 85

Table 12

HIV INCIDENCE IN COHORT STUDIES
RATE OF SEROCONVERSION IN PERCENT

STATE	CITY	STUDY GROUP	INITIAL NO. SERONEGATIVES	INCIDENCE RATE BETWEEN INDICATED YEARS										REFERENCE
				1979	1979	1980	1981	1982	1983	1984	1985	1986	1987	
CA	San Francisco	homosexual men	283	1.1	2.8	11.0	14.8	20.8	2.1	2.1	2.1	0.8		M Hessel, G Rutherford, San Francisco Hlth Dept, pers com
DC	Washington	homosexual men	117					10.7	4.9	4.0				J Goedert, NIH, pers com
CA	San Francisco	homosexual men	615					5.4	4.2					Am J Pub Hlth, 1987;76:685-89
NY	New York City	homosexual men	446					6.8	2.0	2.8				C Stevens, New York Blood Ctr, pers com
CA	Los Angeles	homosexual men	824					5.9	2.5	0.3				J Goedert, R Fox, NIH, MACS, pers com
ND/DC	Baltimore, Washington	homosexual men	808					5.2	3.7	0.3				J Goedert, R Fox, NIH, MACS, pers com
PA	Philadelphia	homosexual men	847					3.9	1.4	0.7				J Goedert, R Fox, NIH, MACS, pers com
IL	Chicago	homosexual men	647					7.0	1.7	0.0				J Goedert, R Fox, NIH, MACS, pers com
MA	Boston	homosexual men	334					3.0						G Seage, Boston City Hlth Dept, pers com
NY	Albany	homosexual men	220					2.3						C Becker, NY State Hlth Dept, pers com
WA	Seattle	homosexual men	45					31.1						A Collier, U of WA, pers com
CA	San Francisco	homosexual men	170					5.9						A Hise, San Francisco Gen Hosp, pers com
NY	Bronx	IV drug users	98					19.0						P Selwyn, Montefiore Hosp, pers com
NY	Queens	IV drug users	29					24.1						S Weiss, Goedert, NIH, pers com
PA	Hershey	homophiliac	30	10.0	10.0	6.7	40.0	23.3	10.0					M E Eyster, Hershey Med Ctr, pers com
FL	Miami	heterosexual partners	47					36.2						M Finchi, U Miami, pers com
PA	Hershey	heterosexual partners	25					16.0						M E Eyster, J Goedert, Hershey Med Ctr, NIH, pers com

Figure 13
HIV Incidence in Cohort Studies of Homosexual Men,
Percent of Uninfected Men Becoming Infected, by Year



donors and the heat treatment of factor concentrates, since 1985 the rate of new infection in transfusion recipients and hemophiliacs has been vastly reduced. The HIV and AIDS epidemic is a composite of many individual, though overlapping, sub-epidemics. Each sub-epidemic has its own dynamics and time course. While the incidence of new infection overall and the incidence in certain subgroups may have declined somewhat, in the absence of specific information, incidence rates cannot be assumed to have declined in all subgroups or in all geographic areas. The trends remain of considerable concern in IV drug users and in heterosexually active persons as well as in localized areas such as inner-cities. Two studies in originally seronegative IV drug users in the New York City area showed conversion to positive in 3% and 19% respectively between 1985 and 1986 (Weiss et al, 1986; Schoenbaum et al, 1986). Clearly individuals continue to become infected. There is insufficient information to speculate yet about the overall status of the HIV epidemic.

VIII. Implications for National Estimate of HIV Prevalence

- A. The Public Health Service Estimate Approach Reconsidered. In May 1986, during the Public Health Service (PHS) AIDS Planning Conference at Coalfont, West Virginia, a group of public health experts estimated the number of HIV infected persons in the United States to be 1 to 1.5 million. At the time, scientific speculation had focused on HIV levels several fold greater than this and no consensus had been attempted. The assembled group of nearly 100 individuals from within and outside Government who were experienced in the scientific and public health aspects of AIDS developed their working estimate based on the estimated size of populations at increased risk multiplied by the corresponding estimates of HIV prevalence from the limited data then available (Table 13). The group particularly expressed concern about the uncertainty of the size of groups at risk. The figure 1,000,000 to 1,500,000 was consistent with what was then known about the progression of HIV infection to AIDS (20 to 30% in 5 years) and the projected cumulative incidence of AIDS (270,000 diagnosed by the end of 1991). The Institute of Medicine, National Academy of Sciences subsequently reviewed the PHS working estimate and considered it reasonable for planning purposes (Institute of Medicine, 1986).

Since 1986, additional data have become available on seroprevalence in risk groups and in other populations, and estimates of the size of two of the risk groups have been modified. Based on the 1986 and 1987 seroprevalence observations, the average estimated prevalence can be adjusted from a range of 15-20% to the range of 20-25% for exclusively homosexual men; from 10% to 5% for bisexuals and men with infrequent past homosexual exposures; from 30% to 25% for heavy users of IV drugs; and the rate of 35% can be used for hemophilia B patients. NIDA currently estimates there are 900,000 heavy users of IV drugs, and 200,000 occasional or intermittent users

Table 13

PUBLIC HEALTH SERVICE ESTIMATE OF HIV PREVALENCE
IN THE UNITED STATES BY POPULATION GROUP, 1986

TOTAL POPULATION INFECTED	ESTIMATED	APPROXIMATE	
	<u>SIZE</u>	<u>SEROPREVALENCE</u>	
Exclusively homosexual throughout life ¹	2,500,000	15%-20%	375,000-500,000
Other homosexual contact ¹	2,500,000- 7,500,000	10%	250,000-750,000
Regular (at least weekly) intravenous drug abuse ²	750,000	30%	225,000
Less frequent IV drug use ²	750,000	10%	75,000
Persons with hemophilia ³	14,000	70%	10,000
Other groups (transfusion recipients, other hetero- sexuals, infants)	?	?	?
Total			1,000,000-1,500,000

¹ Kinsey, et al: Sexual Behavior in the Human Male, Philadelphia, Saunders Publishing Co., 1948; and U.S. Census data, 1980.

² National Institute on Drug Abuse (personal communication), 1986

³ National Hemophilia Foundation (personal communication), 1986

(NIDA, personal communication). The current estimated number of hemophilia A patients is 12,400, and hemophilia B patients, 3,100 (Host Factors Division, CDC, and National Hemophilia Foundation, personal communication). For heterosexual adults 15-59 years of age without specific identifiable HIV risk factors, the population figure 142,000,000 was used based on the 1985 U.S. Census estimate of 148,000,000 less the totals for persons at higher risk in the table. The HIV prevalence in this population is difficult to estimate with the limited data available, but in blood donors and military applicants persons without identifiable risk have accounted for less than about 15% of total infections when seropositives have been interviewed. Therefore, 15% of the age-, race-, and sex-adjusted rate for military applicants, or 0.021%, was selected as the HIV prevalence for this group. For the other groups (heterosexual partners of persons at high risk, heterosexuals born in Haiti and Central Africa, transfusion recipients, etc.) no population size or seroprevalence estimates are available. However, the data available from AIDS case surveillance suggest that this miscellaneous group may account for as many as 5 to 10% of total infections.

The estimate obtained by incorporating these revisions into the 1986 calculation (Table 14)—945,000 to 1,408,000—differs little from the earlier figure. The major limitation of both the original and the reevaluated estimate is the unknown size of the population of homosexual and bisexual men and the distribution within this population of the level of risk activity. In view of the limited impact of the new data and population size estimates, modifying the overall PHS working estimate for HIV infection in the United States does not appear warranted at this time based on this approach.

- B. Extrapolation from Observed Rates. What if the prevalence or a multiple thereof from the only large currently observed groups, blood donors and military applicants, is used to estimate a national number of infected persons? The prevalence for first-time-tested donors, 0.043%, multiplied by the size of the population 15-59 years of age, 148,000,000, gives a national figure of 64,000. This is clearly an underestimate since persons at recognized high risk are largely excluded from the blood donor pool. (There also have been 45,000 AIDS cases reported as of early November 1987.) The military applicant adjusted prevalence of 0.14% multiplied by the size of the population 15-59 years of age gives an estimate of 207,000, also undoubtedly an underestimate because of the under-representation of persons at risk of HIV in the military applicant pool. Preliminary data from other populations including Massachusetts childbearing women and sentinel hospitals provide prevalence estimates 2 to 3 times as high as those in geographically corresponding military applicants. However, even a 3-fold multiple of the applicant prevalence-based extrapolation, 621,000, is well below the PHS estimate. More representative prevalence information will be needed to add precision to an estimate made by this approach.

Table 14

REEVALUATED PUBLIC HEALTH SERVICE ESTIMATE OF HIV PREVALENCE
IN THE UNITED STATES BY POPULATION GROUP, 1987

<u>POPULATION</u>	<u>ESTIMATED SIZE</u>	<u>APPROXIMATE SEROPREVALENCE</u>	<u>TOTAL INFECTED</u>
Exclusively homosexual throughout life ¹	2,500,000	20-25%	500,000-625,000
Other homosexual contact including highly infrequent ¹	2,500,000- 7,500,000	5%	125,000-375,000
Regular (at least weekly) intravenous drug abuse ²	900,000	25%	225,000
Occasional IV drug use ²	200,000	5%	10,000
Persons with Hemophilia A ³	12,400	70%	8,700
" " Hemophilia B ³	3,100	35%	1,100
Heterosexuals without specific identified risks	142,000,000	0.021% ⁴	30,000
Subtotal			900,000-1,270,000
Other groups (heterosexual partners of persons at high risk, heterosexuals born in Haiti and Central Africa, transfusion recipients, other)	additional 5-10% of total number of infections ⁴		45,000-127,000
Total			945,000-1,400,000

¹ Kinsey, et al: Sexual Behavior in the Human Male, Philadelphia, Saunders Publishing Co., 1948; and U.S. Census data, 1980.

² National Institute on Drug Abuse (personal communication), 1987; excludes persons who have used drugs only once or twice

³ Host Factors Div., CDC, and National Hemophilia Foundation (personal communication), 1987

⁴ See Text (VIII. A.)

- C. Mathematical Model Approach. Several researchers, including Dr. Ron Brookmeyer of the Department of Biostatistics at the Johns Hopkins School of Public Health, Drs. Victor De Gruttola and Stephen Lagakos of the Department of Biostatistics at the Harvard School of Public Health, Dr. Jeffrey Harris of the National Bureau of Economic Research in Cambridge, Massachusetts, as well as Mr. James Warner of the White House staff, and AIDS coordinator for the Health Policy Group, have suggested that the number of persons infected with HIV can be estimated from data on reported AIDS cases in combination with data on the rate at which infected individuals progress on to AIDS. These approaches were considered in some detail at the October 15-17 workshop on mathematical modelling of AIDS and HIV infection sponsored by the Institute of Medicine, National Academy of Sciences. A variation of this technique is discussed below.

In all of the methods, the number of AIDS cases diagnosed each year can be calculated as the convolution of the number of persons infected in each preceeding year and the number of those expected to be diagnosed with AIDS. For this particular approach, let $a(t)$ be the number of AIDS cases diagnosed in year t ($t=1978, 1979, \dots, 1987$), let $i(t)$ be the number newly infected in year t , and $d(x)$ be the proportion of infected persons expected to develop AIDS after x years ($x=0,1,2,\dots$) then:

$$a(t) = \sum_{z=1978}^t i(z) \cdot d(t-z) \quad (\text{eq. 1})$$

The number of cases of AIDS per year $a(t)$ is known from surveillance data and the disease progression rates $d(x)$ with accompanying 95% confidence bounds may be estimated from a prospective study of HIV-infected homosexual men in San Francisco. It is possible to estimate the number of persons infected, provided specific assumptions are made about the shape of $i(t)$. Three different sets of progression data were considered: one representing the best estimates from the cohort data, one representing the lower 95% confidence bounds (slowest rate of disease progression) and one representing the upper 95% confidence bounds (fastest rate of disease progression). Three different distributions for the infection curve were considered as follows:

logistic	$I(t)=1/(1+k \exp(-rt))$;
log-logistic	$I(t)=1/(1+(rt)^k)$; and
damped exponential	$I(t)=k \exp(rt^X)$.

AIDS cases reported to the CDC through November 2, 1987, were used in the analysis. The totals were adjusted for reporting delays to give the number of diagnosed AIDS cases each year through 1987. The parameters in the different infection curves and the total infections through 1987 were estimated from

equation (1) using weighted non-linear least squares methods. The final estimates were adjusted for under-recognition and under-reporting of AIDS cases. Validation studies done in five major U.S. cities in 1985 suggested that 20% or more of AIDS cases were either not reported to health departments, or were not diagnosed by a method which would allow them to be counted under the AIDS surveillance definition used prior to September 1987. Variations over time in the completeness of reporting (such as a large number of early AIDS cases being missed) would also influence the projected number of cases, but were not considered in these analyses.

The resulting estimates for the cumulative number infected by the end of 1987 are shown in Table 15. The range of estimated values is large, from 276,000 to 1,750,000 persons infected, reflecting both uncertainty in the progression rate for AIDS and the varied assumptions about the shape of the underlying infection curve. Using only the best estimate of the progression rate data from the San Francisco prospective study, the range of estimates is smaller, from 420,000 to 1,649,000.

These estimates must be evaluated in light of the assumptions made in the models about the shape of the curve and, hence, the spread of the infection. The logistic curve assumes that the spread of infection is limited to a closed group and that all persons in that group have an identical, constant risk for infection. The model does not take into account the addition of individuals who are newly at-risk, for example persons who only recently became sexually active or started using IV drugs. The logistic model also assumes that likelihood of transmission is the same for all those at-risk, whether they are homosexuals, IV drug users, hemophiliacs, transfusion recipients, or heterosexual partners of infected persons and that this risk is constant over time. As a consequence of these highly implausible assumptions, the fitted model indicates that virtually all those who will ever become infected with HIV were already infected by 1984. Current data show that substantial numbers of new infections continue to occur in all population groups except hemophiliacs and transfusion recipients. For all of these reasons, the logistic model is inappropriate and will severely underestimate the total number of persons now infected.

Although the log-logistic model also assumes a closed group at-risk, it allows for a relative slowing in the rate at which the virus is spreading. Such a slowing would be expected for two reasons. First, persons are not homogeneous but have considerably varied risk. Risks will vary by type of exposure (homosexual, IV drug use, heterosexual, etc.) and by the frequency of exposure. Particularly in a closed or relatively closed group, those at highest risk would have become infected earliest in the epidemic while the virus might later spread more slowly among those with lower risk. Second, prevention and

Table 15

PERSONS INFECTED WITH HIV AT THE END OF 1987,
UNITED STATES, ESTIMATED¹ FROM REPORTED AIDS CASES,
BY RATE OF DISEASE PROGRESSION AND ASSUMED INFECTION CURVE

(with 95% confidence bounds in parentheses)

ASSUMED INFECTION CURVE ²	Rate of Disease Progression ³		
	<u>SLOWEST PROGRESSION</u>	<u>MOST LIKELY PROGRESSION RATE</u>	<u>FASTEST PROGRESSION</u>
Logistic	420,000* (403,000- 438,000)	420,000* (312,000- 528,000)	420,000* (268,000- 572,000)
Log-logistic	1,363,000* (918,000- 1,809,000)	853,000* (186,000- 1,519,000)	276,000* (66,000- 511,000)
Damped- Exponential	1,750,000 (576,000- 2,936,000)	1,649,000* (566,000- 2,732,000)	1,468,000* (556,000- 2,380,500)

*chi-square goodness-of-fit $p > .50$

Notes:

- 1 Each of the estimates for the number infected has been increased by 20% to account for unreported or unrecognized AIDS cases.
- 2 See text (VIII.C.) for discussion of limitations of each curve.
- 3 Data for disease progression are taken from a study of infected homosexual men in San Francisco. The lower 95% confidence estimate (slowest progression rate) for the cumulative number of men developing AIDS after each of 1-11 years was taken as 0%, 0%, 0%, 2%, 5%, 9%, 17%, 21%, 26%, 31%, 36%; the best estimate (most likely progression rate) was taken as 0%, 0%, 2%, 5%, 10%, 15%, 24%, 30%, 36%, 42%; and the upper estimate (fastest progression rate) was 0%, 0%, 4%, 8%, 15%, 21%, 31%, 39%, 46%, 52%, 58%. The rates for years 8-11 were not taken directly from the San Francisco data but were extrapolated from prior years.

education efforts would slow the rate of infection. Countering this, however, is the argument that since the major groups at risk are not really "closed," the increasing prevalence of HIV infection could lead to increased spread simply because more infected persons are available to transmit the infection. The log-logistic model is much more appropriate than the logistic, but will likely still underestimate the eventual number of persons who will become infected with HIV.

The third model, the damped-exponential, also allows for a relative slowing in the rate at which the infection is spread, but does not assume that the population at-risk is closed. On the contrary, it assumes that the number of HIV infections is limitless. While such an assumption may be unreasonable over the long-term, it may accurately represent the short-term spread of HIV in populations where prevalence is low and/or the number of persons entering the risk groups exceeds or equals number becoming infected.

Both the log-logistic and the damped-exponential models fit the AIDS surveillance data well, and their curves have similar shapes in the early stages of the epidemic, but diverge rapidly beyond 1984 due to the different assumptions underlying them. Since very few persons infected with HIV progress to AIDS during the first 2-3 years, AIDS case data alone cannot determine which of these models is more appropriate and, hence, what is currently happening with regard to HIV infection. Rather the AIDS cases seen today reflect primarily trends in infection through and including 1984, before current prevention activities, including screening of blood donations, testing and counseling efforts, and information and education activities began. For example, application of the damped-exponential model to surveillance data for transfusion-associated cases would lead to the erroneous conclusion that HIV has spread rapidly in the blood supply since 1984, while application of the log-logistic model to the same data in 1985 would have been falsely reassuring at that time before blood donations were screened for HIV.

It is unlikely that any one of these models accurately describes the transmission of HIV in the population. Many different models are consistent with currently available AIDS surveillance data, and these data alone are not sufficient to determine the extent of HIV infection. Procedures that produce such a wide range of results from the same data indicated that there are either insufficient data or insufficient models or both. Carefully obtained HIV incidence and prevalence data will be essential.

Implications. The estimation of a total number of persons infected remains complex and inexact. The approaches described for computing or recomputing a national HIV prevalence cannot be considered definitive. The results, however, are consistent with the previous PHS working estimate of 1 to 1.5 million. None of the approaches

suggests that that estimate is currently too low or too high, and the available data and mathematical models do not at present warrant a change in the estimate. Since some HIV transmission clearly has occurred in the past 17 months, this implies that the 1.5 million upper limit of the original estimate may have been high at that time. There is no substitute for carefully obtained HIV incidence and prevalence data. Additional surveys and studies are needed to determine the extent to which HIV is spreading through the population.

IX. Observations and Comment

This review of the extent and trends of infection with the human immunodeficiency virus in the United States is necessarily descriptive and qualitative. The marked variability in study design, sampling, and biases among the available serologic surveys and studies makes quantitative comparisons only approximate. Nevertheless, the picture emerges of extensive HIV infection in the recognized risk groups of homosexual and bisexual men, intravenous drug users, and hemophiliacs, and their heterosexual partners. Exclusively heterosexual persons who do not abuse drugs and who are not knowingly the partners of persons with or at risk of HIV infection are at present much less likely to be infected. However, no infection trend information is yet available to evaluate whether the risk is rising for this latter group.

With few exceptions, HIV prevalence in observed groups from the general population, which includes high-risk as well as low-risk persons, are a fraction of 1%. At this time, HIV infection, like AIDS, occurs primarily in young to early middle-aged adults, although insufficient information is currently available on young children. In general, males are currently much more likely than females to be infected, blacks and Hispanics more likely than whites. Geographic differences in infection prevalence remain consistent with the distribution of AIDS cases. While new infections continue to occur, the rate of new infection in many groups of homosexual men appears to have declined, which may have major implications for the overall incidence of new infection, since this group has previously accounted for the largest number of AIDS cases. However, information is not currently sufficient to evaluate infection trends in IV drug users, heterosexually active persons, or in specific geographic areas.

Many gaps in our knowledge remain. More precise and more consistently collected data on the prevalence of HIV infection must be collected for currently recognized risk groups, heterosexually active persons, and accessible segments of the general population. Better and more extensive information is essential for targeting and evaluating control and prevention efforts at local and State level, for predicting future health care needs, and for understanding where the HIV and AIDS epidemic is headed. Better models which make use of the specific data will also aid in our understanding of the spread of this virus. Surveillance of the prevalence and incidence of HIV infection by continually monitoring sentinel populations and expanding focused seroprevalence surveys and studies, as well as developing models to help interpret the data remain a critical element of the Nation's response to this major public health crisis.

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CHRONOLOGY OF MAJOR EVENTS SINCE 1981

- 1981
 - o CASES OF KAPOSI'S SARCOMA AND PNEUMOCYSTIS PNEUMONIA AMONG YOUNG MALES FIRST REPORTED
 - o NATIONAL SURVEILLANCE FOR AIDS BEGUN
- 1982
 - o EPIDEMIOLOGIC EVIDENCE INDICATED THAT AIDS IS CAUSED BY AN INFECTIOUS AGENT
 - o PUBLICATION OF THE FIRST AIDS GUIDELINES FOR HEALTH-CARE AND LABORATORY WORKERS
 - o CASE OF AIDS REPORTED IN HEMOPHILIACS
- 1983
 - o AIDS CASES ASSOCIATED WITH BLOOD TRANSFUSIONS
 - o PHS GUIDELINES FOR PREVENTION OF AIDS IN BLOOD CENTERS AND BETWEEN PERSONS
 - o PHS EXECUTIVE COMMITTEE ON AIDS (LATER THE PHS EXECUTIVE TASK FORCE) ESTABLISHED
 - o TOLL-FREE NATIONAL AIDS HOTLINE ESTABLISHED
- 1984
 - o HUMAN IMMUNODEFICIENCY VIRUS (HIV) ESTABLISHED AS CAUSE
 - o HEAT TREATMENT OF PRODUCTS FOR HEMOPHILIACS RECOMMENDED
- 1985
 - o AIDS ANTIBODY BLOOD TESTS LICENSED
 - o SCREENING OF THE NATION'S BLOOD SUPPLY BEGUN
 - o FIRST INTERNATIONAL CONFERENCE ON AIDS HELD IN ATLANTA, GEORGIA
- 1986
 - o PRESIDENT REAGAN DIRECTED THE SURGEON GENERAL TO ISSUE A REPORT ON AIDS
 - o PHS COOLFANT ACTION PLAN PUBLISHED
 - o SURGEON GENERAL'S "REPORT ON AIDS" ISSUED
 - o EXPERIMENTAL AIDS DRUG, AZT, APPROVED FOR USE AS INVESTIGATIONAL NEW DRUG
 - o PHS COUNSELING AND TESTING GUIDELINES PUBLISHED
- 1987
 - o AZT (ZIDOVUDINE) LICENSED
 - o PRESIDENT REAGAN APPROVED THE AIDS EDUCATION AND INFORMATION PRINCIPLES
 - o PHS AIDS INFORMATION/EDUCATION PLAN PUBLISHED
 - o HIV COUNSELING AND TESTING IN THE PREVENTION OF AIDS EXPANDED
 - o PRESIDENT REAGAN CALLS FOR COMPREHENSIVE NATIONAL PROGRAM TO DETERMINE EXTENT OF HIV INFECTION
 - o PRESIDENT REAGAN APPOINTED THE COMMISSION ON THE HUMAN IMMUNODEFICIENCY VIRUS EPIDEMIC
 - o PRELIMINARY TESTING OF EXPERIMENTAL VACCINE IN HUMAN VOLUNTEERS BEGUN IN UNITED STATES
 - o PRESIDENT REAGAN DECLARED OCTOBER AIDS AWARENESS AND PREVENTION MONTH
 - o PRESIDENT REAGAN APPROVED THE FAMILY OF SURVEYS TO DETERMINE HIV PREVALENCE AND TO CONTINUE COLLECTION OF DATA
 - o REVIEW OF CURRENT KNOWLEDGE ABOUT HIV INFECTION PRESENTED TO THE DOMESTIC POLICY COUNCIL.

CHRONOLOGY OF EVENTS SINCE JUNE 1987
RELATING TO PROPOSED HIV SURVEILLANCE

Background

In June 1987, the President directed the Department of Health and Human Services (DHHS) "to carry out a comprehensive program to determine the nationwide incidence of the human immunodeficiency virus (HIV) and to predict its future occurrence and to initiate epidemiologic studies to determine the extent to which HIV has penetrated the various segments of our society." The Centers for Disease Control (CDC) was directed to recommend the best methods of developing the needed information and for implementing the methods selected. The following is a chronology of events which have occurred in response to the President's directive.

o June 12, 1987

- An ad hoc advisory group composed of personnel from CDC and other PHS agencies met to discuss approaches to determine the extent and spread of HIV infection in the country, and to discuss the option of a national HIV household survey.

o July 7, 1987

- Forty invited specialists in the area of survey methodology from academic institutions, the National Academy of Sciences, Public health departments, the Bureau of the Census, and the various Public Health Service (PHS) agencies met with CDC officials to discuss approaches, design, and implementation of a national HIV prevalence survey. It was emphasized that it would be necessary to conduct pilot studies before undertaking a national household seroprevalence survey.

o September 1987

- Following discussions within CDC and PHS, it was decided to recommend that CDC conduct (a) a nationwide, household-based seroprevalence survey of pilot studies and (b) a comprehensive family of more narrowly focused surveys. The nationwide household survey would be conducted by an outside contractor; the family of surveys would be conducted by CDC in collaboration with State and local health departments and other Federal agencies.

CDC would conduct a rapid intensive review of available HIV prevalence information for a report on the current status of HIV infection in the country, to be presented to the President by November 30.

o September 16, 1987

- Recommendations presented to the Domestic Policy Council (DPC).

o September 21, 1987

- DPC verbally endorses plan for submission to the President.

o September 21-25, 1987

- Initial CDC implementation plan presented to CDC Deputy Director (AIDS) and an oversight group composed of Center Directors was formed.
- Core components of implementation plan included: collect available HIV seroprevalence data from all States for initial report due to President by November 30, 1987; identify 30 participant SMSAs; designate 30 two-person teams for on-site technical assistance; conduct orientation session for site teams, convene workshop for State/local area health officials, deploy site teams, evaluate progress.
- The National Center for Health Statistics forms seroprevalence work group to plan household pilot surveys.
- Thirty SMSAs selected on basis of (1) current cumulative incidence of AIDS; (2) rank for gonorrhea and early syphilis incidence; and (3) geographic representativeness.
- Thirty medical officers and 30 public health advisors identified and paired with potential site; 7 additional medical officers identified and detailed for the intensive review of available data.

o September 25, 1987

- CDC Director introduces and discusses surveys in telephone conference call with State and city health officials in 30 potential participant areas. Extends invitation for 1-3 officials to attend workshop in Atlanta on October 15-16.

o September 28 - October 2, 1987

- Follow-up phone calls by the Center for Infectious Diseases/Center for Prevention Services staff to identify attendees for workshop.

o October 1-13, 1987

- Preliminary drafts of 6 survey protocols developed
- A mass canvassing of State health departments, PHS agencies, and medical research institutions for current unpublished HIV prevalence data.

o October 14, 1987

- Day-long briefing and orientation session held for field team members. Charged with: (1) making site visits to discuss and explain the surveys; (2) obtaining a commitment of participation; (3) determining parameters of participation and resource needs; (4) visiting potential clinics/facilities; and (5) determining need and timing for return visit.

o October 15, 1987

- The President authorized 1) a review of available HIV statistical data and an estimate of the HIV prevalence in the U.S. be provided to the DPC by November 30, 1987, 2) the "family" of HIV surveys and studies be implemented, 3) collection and analysis of HIV prevalence data be continued with quarterly updates provided to the DPC, and 4) a national household-based HIV prevalence survey be implemented following pilot studies to determine feasibility.

o October 15-16, 1987

- Workshop in Atlanta for potential survey participants. Approximately 150 officials from State/city health departments attend.

o October 26, 1987

- Field teams begin site-visits.

o October 30, 1987

- Collection of seroprevalence data from all States concluded and draft composite report in progress.

o November 5, 1987

- Draft of report due to President prepared and submitted to the Assistant Secretary for Health (ASH).

o November 16, 1987

- Final draft of report to the President submitted to ASH.

Future Milestones

o December 2, 1987

- Meeting with Domestic Policy Council (tentative)

o February 28, 1988

- Sentinel surveillance begun in 25 SMSAs and early data received from 6 special studies

o May 31, 1988

- Sentinel surveillance underway in 30 SMSAs and data being received from 8 special studies

o August 31, 1988

- Analysis of a minimum of 2 months data from all SMSAs and 8 special studies

o November 30, 1988

- Analysis of 6 months data from all SMSAs and 10 special studies

SUMMARY OF
HHS PLAN TO DETERMINE THE INCIDENCE, PREVALENCE, AND RISK FACTORS
FOR HIV INFECTION IN THE UNITED STATES

I. Background

In June 1987, the President directed HHS "to carry out a comprehensive program to determine the nationwide incidence of the HIV virus and to predict its future occurrence and to initiate epidemiologic studies to determine the extent to which the HIV virus has penetrated the various segments of our society." Accurate information on HIV infections is needed at the local, State, and national levels in order to:

- o Determine the number of persons currently infected with HIV in the United States (prevalence). The number infected and asymptomatic far exceeds those with AIDS disease and AIDS related complex.
- o Determine the number of new infections occurring each year in the United States (incidence).
- o Determine the relative importance of various modes of transmission (e.g., the extent of heterosexual transmission).
- o Identify the size and location of populations at greatest risk of infection.
- o Target prevention efforts, including testing, counseling and education/information.
- o Evaluate the impact of prevention efforts upon HIV transmission.
- o Project the number of HIV infections and cases of AIDS in the future in order to determine the needs for health-care and social services.

II. Data Available by November 30, 1987

All data from ongoing surveillance systems as well as relevant published information will be thoroughly analyzed and available before November 30, 1987. This will include substantial geographic and demographic breakdown of reported cases of AIDS:

- o Twenty-four months of Department of Defense data from 1,250,000 military applicants (50 States).
- o Twenty-four months of Red Cross data from 12,000,000 blood donations (about 50 States).
- o Eight months of Department of Labor data from 40,000 Job Corps applicants (50 States).
- o Nine months data from sentinel hospitals from 7 cities.
- o Preliminary data from sexually-transmitted disease clinics (10 cities), and drug abuse clinics (15 cities).

- o Incidence data in 6 cohorts of homosexual men.

Comparison of all above data by geographic area, sex, age, and race will be done.

The thorough analysis of existing data as well as early information from new surveys will examine the consistencies and inconsistencies, if any, of the data sets to determine to what extent the distribution of HIV infection differs from reported cases of AIDS.

III. Nationwide HIV Household Prevalence Survey

A nationwide seroprevalence survey to determine the number infected with HIV in the U.S. will be conducted as follows:

- o The survey will be conducted in two phases, entirely by an outside PHS contractor.
- o The first phase would be developmental, consisting of pilot studies in metropolitan areas to examine factors affecting study validity such as participation rates, response bias, etc.; the second phase would be the nationwide household survey.

IV. Comprehensive Family of Surveys

In order to obtain information on the incidence (new infections) and prevalence of HIV infection in risk groups and other defined populations, HHS will conduct the family of surveys detailed in the attached memorandum. Current data on prevalence of HIV infection in military applicants and blood donors are consistent with the geographic distribution of reported AIDS cases. These data indicate that HIV infection is highly concentrated in major metropolitan areas. The top 20 metropolitan areas with 25 percent of the U.S. population report 75 percent of the AIDS cases. Extensive surveys in these and 10 moderate to low prevalence areas, called sentinel cities, are needed to:

- o Follow prevalence and incidence rates and risk factors as early warning for the possible emergence of HIV infections in new populations.
- o Target prevention activities and plan for health care and social services.
- o Evaluate the effectiveness of prevention activities.

COMPREHENSIVE HIV SURVEILLANCE

	TARGET <u>DATE</u>	NUMBER TESTED <u>ANNUALLY</u>
NATIONAL HOUSEHOLD SEROPREVALENCE SURVEY		
PILOT STUDIES		
Planning started	6/12/87	
Completed	4/30/89	3,800#
NATIONAL HOUSEHOLD SURVEY		
Recommendations to proceed or not	5/15/89	≥50,000#
Completion	6/30/90	
FAMILY OF SURVEYS		
SENTINEL SURVEILLANCE IN 30 SMSA*		
Sentinel hospitals		
Sexually transmitted disease clinics		
Drug abuse clinics		
Tuberculosis clinics		
Childbearing women/newborns		
Family planning clinics		
Plan presented to Domestic Policy Council	9/16/87	
All operational	5/30/88	1,600,000
SPECIAL ONGOING STUDIES		
Childbearing women/newborns		
Military applicants		
Military active duty		
Job Corps		
Blood donors		
Prisons		
College students		
Homosexual/bisexual cohort		
National Health and Nutrition Examination Survey		
National Health Interview Survey		
Clinical specimens		
Emergency rooms		
All Studies Operational	6/30/88	7,700,000

#One time testing only. Other surveys will be ongoing in order to derive incidence (new infection) data.

*Standard Metropolitan Statistical Area (SMSA)

INFORMATION ABOUT HIV INFECTION
NEEDED TO GUIDE POLICY AND PLANNING

- o Number of people infected (prevalence) by:
 - sex, age, location, ethnic group,
sexual orientation
- o Progression of the HIV epidemic (incidence) by:
 - sex, age, location, ethnic group,
sexual orientation
- o Incidence and prevalence information about HIV is needed to:
 - target prevention resources
 - plan for health service needs
 - direct behavioral, prevention, and other research
 - evaluate prevention and control programs

Status of the National Household Seroprevalence Survey

A random sample, household-based survey is planned as a part of the comprehensive program to determine nationwide incidence of HIV. The survey will be conducted by an outside contractor selected by a competitive bidding process.

Pilot studies are to be undertaken sequentially in three metropolitan areas before the national survey is initiated in the field because of the need to evaluate the influence of various factors that may affect the validity of a nationwide study. The studies are to include metropolitan areas of high- and low-case prevalence and both small as well as large metropolitan areas.

The purposes of the pilot studies are to provide data to test the feasibility of the proposed national household seroprevalence survey, determine the best means of assuring high levels of participation and means of assuring confidentiality or preserving anonymity, and solve logistical problems such as methods of blood collection.

The relative size of sampling error depends on the level of overall participation in the survey as well as the observed total prevalence of infection. Preliminary data from the National Center for Health Statistics (NCHS) National Health Interview Survey suggests the participation level may be approximately 69 percent. There are reasons why those at highest risk for infection might be the least likely to participate in a general household survey. Some at low risk may also be reluctant to participate from a mistaken fear that they may catch AIDS from the test.

The effects of non-response biases on the estimates in this survey are potentially great. It is likely that a key pathway of entry of HIV into the general heterosexual population includes infected IV drug users. IV drug users and prostitutes are underrepresented in general population surveys. It is possible that men who use prostitutes will also be biased toward nonresponse. Similarly, homosexual/bisexual men and their partners may be reluctant to participate in the survey. Little is known about the size of these groups. To the extent that those with high-risk behaviors are underrepresented in the tested samples, the overall seropositive rate within the sample will be underestimated. Since the expected rate of infection in the "low-risk" population is well below 1 percent, underrepresentation of high-risk groups would make the observed national rates even smaller. An underestimate of the overall rate of infection may lead to a false sense of reassurance that HIV infection is not spreading in risk groups or the general population. This could impede measures to control the epidemic.

The pilot studies, to begin in late spring 1988, will provide information on the willingness of the public to participate in a household survey. In addition, comparisons of these data with studies from the family of HIV surveys in the same communities will provide a basis for evaluation. If the pilot studies indicate that participation will be satisfactory, that the survey results are sufficiently reliable and that a national survey will provide valuable additional information, it will begin within 18 months from now. Results will be available by July 1, 1990.

The timetable for the National Household Seroprevalence Survey is outlined in the attached table.

TIMETABLE
National Household Seroprevalence Survey

Projected Completion Date

CONTRACTING PROCESS

o Publish synopsis in Commerce Business Daily	9/21/87
o Domestic Policy Council memorandum authorizing pilot study	10/15/87
o RFC development	11/23/87
o Release of solicitation	12/14/87
o Proposal Preparation by Prospective Contractors (60 days)	2/12/88
o Evaluation by Government	3/10/88
o Negotiations	3/29/88
o Best and final review and selection	4/11/88
o Human subject review (NIH)	4/15/88
o OMB Clearance	4/15/88
o EEO Clearance	4/15/88
o Award	4/29/88

PILOT STUDIES (13 months, beginning 5/1/88)

o Develop study design, survey instruments and consent form (30 days)	5/30/88
o Conduct trial surveys, sequentially (10 months)	4/30/89
o Results of first pilot study	10/1/88
o Results of second pilot study	2/1/89
o Make recommendation on national survey	5/15/89
o Results of third pilot study	6/1/89

NATIONAL SURVEY (15 months beginning 3/1/89)

c Design national survey	6/30/89
o Conduct national survey (6-9 months)	3/30/90
o Preliminary data available	3/30/90
o Analysis and report	6/30/90

CENTERS FOR DISEASE CONTROL (CDC) AIDS INFORMATION/EDUCATION PROGRAMS,
SURVEY OF AIDS KNOWLEDGE, AND EVIDENCE OF BEHAVIORAL CHANGES

CDC INFORMATION/EDUCATION PROGRAMS

Lacking a vaccine and having only one drug of limited effectiveness, information and education are the only measures available for preventing AIDS and HIV transmission. In fiscal year 1987, all of the basic elements of a comprehensive information/education program were put in place; in fiscal year 1988 the program will be fully operational. The CDC AIDS information/education program is based on the Public Health Service (PHS) "Information/Education Plan to Prevent and Control AIDS in the United States." A brief description of the major components of the program follows.

THE PUBLIC

During 1987, an intensive, comprehensive public information program was initiated in response to the PHS planning conference held in June 1986 in Coolfont, West Virginia. This effort includes:

- o An intensive national public information campaign was planned and implemented with its kickoff in October 1987. The campaign featured: 1) October as "AIDS Awareness and Prevention Month," 2) distribution of public service announcements to television and radio networks and stations across the country, 3) the distribution of a specially designed brochure and materials based on the brochure for use by national magazines, and 4) mobilizing the active involvement of public and private organizations in AIDS prevention efforts.

In July 1987, CDC contracted with Ogilvy and Mather (the third largest advertising agency in the United States) to conduct the national public information campaign.

During fiscal year 1987, approximately 11.5 million publications were distributed, including more than 8 million copies of the Surgeon General's Report on AIDS. In fiscal year 1988, through November more than 8 million copies of the campaign brochure were distributed.

Public Service announcements were distributed to more than 1,000 television and 7,000 radio stations.

The Fall Campaign generated significant interest and involvement from the media, national and community based organizations and health departments. With an expedited decision and clearance process, even more might have been accomplished, thus avoiding late dissemination of the general public brochure and delays in getting PSAs produced and distributed to the media.

- o The National AIDS Hotline, which was started in 1983 and is now under contract with the American Social Health Association, was handling up to 2,000 calls per day during 1987 and not able to respond to the growing number of callers. This toll free hotline provides people easy access to information about AIDS. In September 1987, the contract was expanded to meet the existing demand and in anticipation of increased demand from the National campaign. The hotline is now capable of handling more than 12,000 calls per day.
- o A contract was awarded in September 1987 to Aspen Inc. to set up a National AIDS Clearinghouse system which will maintain a comprehensive database inventory of AIDS resources and services (organizations, materials, testing sites) to supplement public health information services available through the National AIDS Hotline and State and local health education and risk-reduction programs. Materials will be distributed by the Public Health Service through the Clearinghouse; and through the electronic database, AIDS prevention workers will have access to a wide range of information resources.

SCHOOL AND COLLEGE-AGED YOUTH POPULATIONS

CDC's program on school health education to prevent the spread of AIDS was initiated in fiscal year 1987 to help school personnel and others plan, implement, and evaluate educational efforts to prevent morbidity and mortality due to HIV. The program applies the principles for AIDS education developed by the President's Domestic Policy Council by enabling schools, and other organizations that serve the needs of youth who do not attend school, to determine AIDS education strategies that are consistent with community values and needs.

- o In September 1987, cooperative agreements were established with 42 national, State, and local education agencies to help schools and other organizations implement AIDS education for youth.

Seven cooperative agreements were awarded to national organizations with proposed programs to increase the number of schools, and agencies serving out-of-school youth, that provide effective AIDS education.

Five cooperative agreements were awarded to national organizations with proposed programs to increase the number of organizations serving the educational needs and interests of black and/or Hispanic youth.

Two cooperative agreements were awarded to national organizations with proposed programs to help State departments of education provide effective education about AIDS.

Cooperative agreement awards were made to 15 State and 12 local education agencies that serve jurisdictions with the highest cumulative incidence of AIDS cases to provide intensive, locally-determined, education for school-age populations. Each education agency will work with its corresponding health department, parent groups, and community leaders in determining and implementing educational strategies that are consistent with community values and needs.

Cooperative agreement awards were made to two State agencies and one local education agencies for training/demonstration programs to help State and local education agency representatives from throughout the Nation implement effective AIDS education in their schools. Funds were provided in these awards to cover the travel and per diem expenses of approximately 360 educators to attend the training/demonstration programs.

One cooperative agreement award was made to a national organization representing college health services to help colleges and universities provide effective health education about AIDS.

- o The AIDS School Health Education subfile, part of the Combined Health Information Database (CHID), became operational in April. The annotated bibliography contains over 100 abstracts of curricula, policies, teaching materials, and programs. The subfile provides educators across the nation with access to a wide variety of materials developed at the national, State, and local levels.

A contract was awarded to integrate AIDS-related information into a comprehensive (kindergarten through grade 7) school health curriculum, Growing Healthy, and to develop an AIDS education module for secondary school students as part of the Teenage Health Teaching Modules. Both curricula are widely used in elementary and secondary schools across the nation.

Financial support was provided to the National Education Association (NEA) for preparing and distributing a report to help teachers educate students about AIDS and involve the community in determining appropriate and effective AIDS education strategies. The report will be distributed by NEA to its approximately 1.8 million members.

Technical reviews of draft materials on AIDS education were provided for: The American Council of Life Insurance and the Health Insurance Council of America in producing a brochure entitled "Teens and AIDS: Playing It Safe"; several publications for teachers and for students by Scholastic, Inc.; a science curriculum for 11th and 12th grade high school students by Enterprise for Education; a comprehensive AIDS curriculum developed by New York State; and a teacher's resource guide developed by the National Education Association's Health Information Network. These materials have all been published and distributed by the organizations that developed them.

Technical assistance was provided to 12 cities and 12 States to help develop a survey measuring adolescents' knowledge, beliefs, and behaviors related to AIDS and HIV transmission. State and local education agencies will use survey data, which they will collect in February, to plan and improve educational efforts about AIDS.

Technical assistance was provided to the publishers of Student Life Magazine, a Time Inc. publication, to assess college students' beliefs and behaviors related to AIDS.

Partial financial and technical assistance was provided to the National Adolescent Student Health Survey (NASHS) to examine AIDS-related knowledge and attitudes of the nation's youth. Data is being collected now, with preliminary reports expected in spring 1988.

A contract was awarded to the National Academy of Sciences to provide for a systematic assessment and summary of the most important behavioral research that has and is being conducted nationally and to identify additional research to prevent HIV transmission to children and adolescents. The contract was awarded in cooperation with the National Institute on Mental Health, National Institute on Drug Abuse, and the National Institute for Child Health and Human Development. This effort will be completed by September 1988 and will provide a useful source of information for educators.

PERSONS AT INCREASED RISK OR INFECTED

Since 1986, CDC has funded a variety of AIDS prevention programs directed primarily at persons at increased risk or who are infected:

Community Health Education/Risk Reduction (HE/RR)

- o Since 1986, CDC has funded 59 State and local health departments to establish or maintain AIDS HE/RR programs. The purpose of these programs is to enable State and local health departments and their subcontractors to prevent the further spread of HIV infection using a wide range of community interventions carried out over an extended period of time. Activities funded included (1) assessing community needs; (2) assessing current levels of personnel, interested community organizations, and financial resources for AIDS prevention in communities; (3) determining the baseline prevalence of human immunodeficiency virus (HIV) infection in groups at risk and in the general population; (4) determining baseline levels of disease-related knowledge, attitudes, and behaviors among persons at risk of infection; (5) determining baseline levels of knowledge and attitudes about AIDS and HIV infection in the general population, including fears and beliefs about methods of transmission; (6) coordinating the prevention efforts of and providing partial funding for minority and community-based organizations which carry out AIDS education; (7) developing special initiatives targeted at minority populations; and (8) developing a comprehensive plan at the State and local level to achieve AIDS prevention objectives.

- o In the 18 months that the HE/RR cooperative agreements have been funded much progress has been made; however much more remains to be done. By 1987, 63 percent of programs had completed assessments of needs and resources for their State or city and 56 percent have completed analysis of this data. Seventy-three percent had collected and analyzed at least some HIV seroprevalence data. Two-thirds of programs have begun collecting knowledge, attitude, and behavior information from persons at high risk of HIV infection and 21 percent have completed data analysis. Sixty-eight percent of programs have initiated surveys of the knowledge, attitudes, and risk behavior for HIV infection in the general population; 40 percent had analyzed that data. Seventy-four percent of programs are now funding community-based organizations to carry out AIDS prevention and 60 percent of projects have prevention programs targeted to minorities. More than 77 percent of the programs have functioning telephone information hotlines and 54 percent have functioning speaker bureaus.

Counseling/Testing Programs

- o A major strategy to prevent HIV transmission is to encourage widespread counseling and testing of people whose behavior has increased their risk for HIV infection. Since 1985, CDC has funded 55 State and local health departments to establish alternate test sites (ATS) for HIV testing. Subsequently, these ATS became counseling and testing centers. Testing of people whose behavior increases their risk of HIV infection is now encouraged in sexually transmitted disease (STD) clinics, drug treatment facilities, women's health clinics, tuberculosis treatment clinics, and in other medical facilities. All ATS and counseling and testing sites since 1985 have maintained systems for medical, drug treatment, and psychiatric referral for seropositive people. Seropositive women are routinely counseled about the risk of perinatal transmission and the need to defer pregnancy.

Currently, 45 percent of counseling/testing sites are located in public facilities established for this purpose. Approximately 42 percent are located in clinics for the treatment of STD, 2.3 percent are located in health clinics for homosexual men and only 1-2 percent are located in hospital outpatient clinics, women's health clinics, or drug treatment facilities. Five percent of counseling and testing sites are located in other facilities. Many of the counseling and testing programs in STD clinics and all of the testing sites in women's health clinics and drug treatment facilities were established 1987.

- o By June 30, 1987, approximately 1,040 public counseling and testing sites were in operation in the United States. Since mid-1985, approximately 676,000 people have been tested for HIV at public counseling and testing facilities. More than 57,300 (8.5 percent) have repeatedly tested positive. Since the program began in 1985, the percentage testing positive has declined because the proportion of those being tested who engage in high-risk behavior has decreased. In 1986, 15 percent of people tested were positive for HIV antibody; in 1987, the percentage of people testing positive is only 6 percent.

- o In addition to offering HIV counseling and testing to clients in a variety of clinic sites, 27 city or State programs carry out partner notification. Priorities and procedures for partner notification vary from State to State based on local needs and available resources.
- o A major expansion of the number of counseling and testing sites especially in STD clinics, drug treatment facilities, and women's health clinics will be funded by FY 1988 cooperative agreements.

Prevention of AIDS in Minority Populations

- o Minority communities have disproportionately high rates of AIDS in the United States. Nearly 40 percent of the known cases of AIDS have been reported among blacks and Hispanics. In recognition of this problem, Congress has authorized funding of special initiatives for AIDS education and prevention among minorities. CDC has made AIDS prevention in minority populations a major priority.
- o On September 25, 1987, CDC awarded more than \$7 million to 41 State and local health departments to support community-based initiatives to prevent AIDS among minorities who are at risk for HIV infection. Most of the States plan to contract with community-based organizations to carry out these activities.
- o On September 28, 1987, to help stimulate AIDS education and prevention at the local level, CDC awarded approximately \$500,000 to the United States Conference of Mayors (USCM) to provide funds to minority-oriented, community-based organizations. USCM awards contracts of up to \$20,000 to such organizations for AIDS education among minorities. USCM will also use the CDC financial assistance to conduct up to five program planning workshops for community organizations.
- o During 1988, CDC will provide funds to as many as 30 national minority organizations for AIDS education and prevention activities. The CDC-supported efforts of these organizations will be closely coordinated with those supported through State and local health departments so that resources can be effectively utilized and that local efforts to prevent the transmission of HIV among minorities at risk are stimulated and well-supported.

AIDS Community Demonstration Projects

- o AIDS Community Demonstration Projects are flexible, community-based programs which provide for thorough, on-going, scientific evaluation of AIDS prevention activities at the community level. CDC has established AIDS Community Demonstration Projects in Dallas, Texas; Seattle, Washington; Denver, Colorado; Albany, New York; Chicago, Illinois; and Long Beach, California. In addition, a demonstration component has recently been added to the New York City AIDS Prevention Program.

- o The AIDS Community Demonstration Projects are currently evaluating the effectiveness of both broadly directed and focused prevention activities in changing AIDS-related knowledge, attitudes, beliefs--and ultimately, sexual and drug using behaviors. Examples of broadly directed activities that are undertaken include utilizing the findings of a population-based survey to develop a surveillance strategy, evaluation of partner notification procedures, and evaluation of efforts to reach street youth. At each site, approximately 1,000 persons have been enrolled in cohorts to facilitate monitoring of changes and trends in AIDS-related knowledge, attitudes, beliefs, and behaviors. In addition, the Demonstration Projects provide opportunities for evaluation in a community setting of more focused educational interventions which target the elimination or reduction of high-risk behavior in a community setting. An example of a more focused activity is the evaluation of specific health education messages among a group of 450 homosexual men in Albany, New York. This allows innovative interventions which appear to be effective among small groups in research settings to be evaluated in a community-based program.
- o The findings of the AIDS Community Demonstration Projects will be utilized to plan and redirect when necessary, monitor, and evaluate the effectiveness of the efforts of the AIDS prevention projects.

Perinatal AIDS Prevention Projects

- o Pilot demonstration projects for the prevention of perinatal transmission of HIV infection have been awarded to the New Jersey State Department of Health, the Nassau County Department of Health (Long Island, New York), and the Houston (Texas) Department of Health and Human Services. The purpose of these projects is to assist areas experiencing substantial numbers of HIV infection in women and children in developing effective perinatal prevention programs.

HEALTH WORKERS

There is a need provide health workers with information to effectively participate in the fight against AIDS. In addition, it is necessary to assess the risk of AIDS in the workplace and to prevent transmission of HIV to those who may be at risk. To inform health workers about AIDS and HIV transmission, CDC has been providing scientific/technical information, conducting training in the use of HIV laboratory tests, training State and local health personnel who are working on AIDS health education/risk reduction and counseling and testing programs, and providing information about AIDS in the work place. Also, CDC monitors the quality of performance of HIV antibody testing.

- o Scientific and technical guidelines/recommendations are developed and disseminated through the Morbidity and Mortality Weekly Report. Through November 17, 1987, CDC has published 27 such guidelines.
- o Educational programs on AIDS for dentists and auxiliary personnel have been developed.

- o In 1988, 600 laboratorians will be trained in HIV laboratory testing.
- o During 1987, an HIV antibody proficiency testing program was begun. More than 700 laboratories have enrolled in the program.
- o CDC capabilities are being expanded to meet the increased demand for training of State and local AIDS prevention project workers (114 courses planned for FY 1988).
- o CDC is assisting the Occupational Safety and Health Administration, Department of Labor, in their efforts to inform health care and emergency workers about AIDS. A joint advisory notice "Protection Against Occupational Exposure to Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV)" was prepared in October 1987.

RESOURCES

In fiscal year 1986, CDC had devoted \$34.2 million to AIDS information/education activities. The amount for fiscal year 1987 rose to \$104.7 million and for fiscal year 1988, the President's budget includes \$177.6. Both Houses of Congress have recommended funding at higher levels. The following table provides details of the budget.

Centers for Disease Control
AIDS Information/Education
(in millions)

	Estimate FY87	FY 88 President's Budget
THE PUBLIC	26.8	23.4
AIDS Hotline	2.3	2.3
Clearinghouse	3.0	3.0
National Information Activities	21.5	18.1
National Campaign	(20.0)	(5.0)
State and Local Campaigns		(7.5)
SCHOOL AND COLLEGE AGED YOUTH	11.3	20.9
National Efforts	2.3	2.4
Material Development & Dissemination	1.3	1.4
State and Local Projects	7.7	17.1
PERSONS AT INCREASED RISK	65.2	130.6
State and Local HE/RR Projects	14.6	15.2
Counseling and Testing Projects	33.2	90.8
State and Local Minority Activities	7.0	7.0
National Minority Emphasis	--	3.0
Demonstration Projects	4.2	4.4
Innovative Risk Reduction Projects	.5	0
Conference of Mayors	.3	.4
Hemophilia Project	3.5	3.5
Prevention of Perinatal AIDS	1.9	6.3
HEALTH WORKERS	1.4	2.7
Training	.2	1.2
Laboratory Evaluation	1.0	1.0
Other	.2	.5
TOTAL	\$104.7	\$177.6

SURVEYS OF KNOWLEDGE

Since the major expansion of information/education activities occurred in 1987, particularly the initiation of the National public information campaign, 1987 is being used as the base year for measuring public knowledge about AIDS. A national population-based survey was conducted by the National Center for Health Statistics during August and September 1987. Ninety-six percent of people surveyed know that the AIDS virus can be transmitted to others by needle sharing and sexual intercourse. Ninety-one percent know that the virus can be transmitted from an infected mother to her child during pregnancy or delivery. However, 47 percent also believe that it is very or somewhat likely that a person will get the AIDS virus by sharing plates, forks, or glasses with a person who has AIDS; 41 percent think that it is very or somewhat likely that a person can get the AIDS virus from being coughed or sneezed on by someone who has AIDS. In addition, 31 percent believe the AIDS virus can be transmitted by using public toilets, and 25 percent believe a person can get the AIDS virus by donating blood. Mosquitoes (38 percent) and working with someone with AIDS (21 percent) are also misidentified as very or somewhat likely to cause a person to get the AIDS virus.

Other national public opinion polls conducted by the Gallup Organization show that the percentage of Americans who have heard or read about AIDS increased from 77 percent in June 1983 to 95 percent in 1985 and to 98 percent in March 1986. The percentage who said they knew someone with AIDS doubled from 3 percent in June 1983 to 6 percent in November 1986. Those reporting "very serious concern" about the spread of HIV have almost tripled from 7 percent in 1983 to 19 percent in 1986. However, only 11 percent in 1986 reported changing their sexual behavior because of AIDS. Clearly, knowledge and concern have not been enough for many persons to change their behavior. The effects of the present information campaign will be evaluated through the ongoing Health Interview Survey.

In the general population, over 90 percent of respondents typically provide correct answers to questions regarding how the AIDS virus is spread, which groups are most affected, and how risk of infection can be eliminated or reduced. Efforts need to be directed toward convincing the public that the AIDS virus is not casually transmitted.

EVIDENCE OF BEHAVIORAL CHANGES

Few educational interventions regarding AIDS and HIV transmission have existed for enough time to permit observation and evaluation of their impact. In general, the effectiveness of education as a means for preventing HIV infection depends on the nature of the group being addressed. In low risk groups, only small changes may occur after educational interventions. Group members who perceive themselves as being at low risk may be less likely to make major changes in behavior. For example, a survey of University of Maryland students found that knowledge of AIDS and HIV transmission alone was not accompanied by change in high risk behavior among some sexually active students (Freimuth et al., 1987). In high risk groups, higher levels of

change seem to occur with educational interventions, probably because individuals are known who have AIDS or are HIV infected, so the consequences of risky behavior are much more visible. However, even within these groups, some persons have not changed risky behaviors.

Studies from three populations allow more specific assessment of the influence of AIDS prevention efforts: studies of homosexual male cohorts over time; surveillance of sexually transmitted diseases in homosexual male and heterosexual populations; and investigations of trends in drug use and related practices among IV drug abusers.

Studies of homosexual male cohorts. AIDS prevention programs in the form of targeted community messages to the homosexual male population have contributed to some changes in behavior. While the number of sexual partners, the frequency of anal sex, and the frequency of unprotected sex without use of condoms has decreased within the homosexual population, the changes appear greatest in areas with high AIDS morbidity. For example, over 90 percent of the high-risk men studied in San Francisco had dramatically reduced their high-risk sex practices by 1986 (Centers for Disease Control, 1986). However the Multicenter AIDS Cohort Study of over 5000 homosexual and bisexual men found significant but limited change. Fifty-one percent continued to practice anal sex, although the proportion not practicing it increased significantly. Although condom use doubled, more than two-thirds of the men did not use condoms (Fox et al., 1987). In addition, a survey of condom use in Pittsburgh among 503 homosexual and bisexual men demonstrated that about 60 percent of the men practiced anal sex without using condoms, yet most endorsed the belief that condoms can "reduce the spread of AIDS." (Valdiserri, 1987). These data reinforce the fact that knowledge alone may be insufficient to influence behavior change and argues for intensive risk-reduction education.

Despite changes in behaviors documented in these studies, the prevalence of HIV infection within most homosexual communities had increased to a level of 30 to 70 percent by the time changes were made. Therefore, the absolute risk of transmission resulting from high risk behavior, especially receptive anal sex, has remained high.

The challenge in the future will be to achieve behavior change on a broad scale. Not all homosexual men are active members of the homosexual community. In fact, many bisexual men do not consider themselves to be homosexual. In addition, there are cultural barriers to reaching black and Hispanic homosexual men who are at risk of being infected.

Surveillance of sexually transmitted diseases (STD). Other indices of a decrease in high-risk sexual behavior among homosexual men include the decline in incidence of some STDs. Data from San Francisco; California; Washington State; Indianapolis, Indiana; and Columbus, Ohio, show decreases in both the number and rate of primary and secondary syphilis among homosexual males, and rectal gonorrhea among males. For example, rates of primary and secondary syphilis from 1982 to 1986 decreased as much as 72 percent. Rectal gonorrhea among males during the same period of time decreased as much as 90 percent (see attached table). However, in Florida during the first 3 months of 1987 primary and secondary syphilis among homosexual/bisexual men rose 108 percent compared to the same period in 1986 (CDC, 1987).

The Multicenter AIDS Cohort Study involving over 5000 homosexual men in 4 major U.S. cities, the San Francisco study, and smaller cohorts of homosexual men in other cities have shown a steep decline in new HIV infection rates since 1983. Annual incidence rates of HIV infection have dropped from 10-20 percent to 1-2 percent or less.

Among the heterosexual population, reported primary and secondary syphilis for the first half of 1987 in the United States increased almost 30 percent over the comparable period in 1986. Most of this increase occurred in selected urban communities. Blacks and Hispanics experienced all of the increase in the most populous States. The increases in primary and secondary syphilis in some metropolitan areas among core STD populations may be the forerunner of future increases in heterosexual HIV-related morbidity and mortality.

Trends in intravenous drug use and related practices. Efforts to prevent HIV infection among IV drug abusers can be directed at 1) discouraging individuals from both initial exposure to and continued use of intravenously administered drugs and at 2) encouraging those individuals who persist in using drugs intravenously to adopt practices which reduce the likelihood of HIV transmission.

Knowledge of the risks associated with IV drug abuse appears to be widespread among drug users: in 1987, 82 percent in New Jersey; 93 percent in New York City; and 90 percent in Sacramento believed that they were at increased risk of AIDS. However, most persisted in sharing needles.

Fear of AIDS appears to be responsible for motivating IV drug abusers to seek treatment and motivating IV drug abusers to reduce the risks associated with intravenous drug abuse. In New Jersey, 47 percent in treatment programs reported they sought treatment because of fear of AIDS.

Enrollment in a drug abuse treatment program appears to be associated with a decrease in practices associated with risk of HIV transmission. In New York City, among 195 in methadone maintenance programs, those in treatment over 24 months injected drugs less frequently (5 versus 53 times/month), allowed others to share their works less often (.76 versus 12 times/month), and shot up in a shooting gallery less frequently (.84 versus 12 times/month) compared to those in treatment for less time.

Therefore, current evidence suggests that: some IV drug abusers who are in treatment programs and are concerned about AIDS may be educated about the disease and risks of HIV infection. A proportion of IV drug abusers, when aware of these risks, will make efforts to change their behavior to reduce the risks. Enrollment in drug treatment programs appears associated with a decrease in practices associated with HIV transmission. Whether these self-reported changes in behavior can be validated through decreased infection rates remains to be determined.

The above data focuses on IV drug abusers in treatment programs. The outlook is not encouraging for people who are addicted and do not seek or are unable to obtain treatment because of a shortage of space or "slots." This is a particular problem in eastern cities where the seroprevalence of HIV is high among IV drug abusers, and blacks and Hispanics. In the future, a major increase of funding is needed to rapidly to expand the number of "slots" available in drug treatment facilities.

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Table
Trends in Primary/Secondary (P&S) Syphilis in Homosexual Males
and Rectal Gonorrhea in Males, Selected Cities, 1980-1987

<u>City/Year</u>	<u>P&S Syphilis-Homosexual Number</u>	<u>Male Rectal Gonorrhea Number</u>
San Francisco		
1980	833	5098
1981	1041	4833
1982	1043	4008
1983	915	2109
1984	661	1375
1985	432	703
1986	293	390
1987*	168	226
*Jan-Jun 1987		
New York City		
1980	N/A	N/A
1981	N/A	N/A
1982	N/A	1577
1983	480	1138
1984	417	485
1985	396	934
1986	160	462
1987	61*	155**
*Jan-Aug 1987		
**Jan-Sep 1987		
Washington State		
1981	N/A	619
1982	N/A	598
1983	147	394
1984	119	257
1985	52	225
1986	35	106
1987	13	N/A

Table (continued)
 Trends in Primary/Secondary (P&S) Syphilis in Homosexual Males
and Rectal Gonorrhea in Males, Selected Cities, 1980-1987

<u>City/Year</u>	<u>P&S Syphilis-Homosexual Number</u>	<u>Male Rectal Gonorrhea Number</u>
Indianapolis		
1980	29	75
1981	46	120
1982	67	113
1983	30	118
1984	27	80
1985	20	32
1986	19	20
1987	12	12
Columbus, Ohio		
1980	50	N/A
1981	52	N/A
1982	54	N/A
1983	65	93
1984	34	69
1985	8	43
1986	9	41
1987	1	13



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
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STATEMENT OF

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PUBLIC HEALTH SERVICE
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

BEFORE THE

COMMITTEE ON FOREIGN RELATIONS
U.S. SENATE

December 9, 1987

Mr. Chairman and members of the Committee, I am here today to discuss the Centers for Disease Control's (CDC) activities in this country and internationally which are directed toward preventing and controlling AIDS and the spread of HIV infection.

BACKGROUND

In the United States, more than 47,000 cases of AIDS and nearly 27,000 deaths have been reported since 1981. We estimate that there are between 1 and 1-1/2 million people infected with human immunodeficiency virus (HIV), and we project that by the end of 1991, there will be 270,000 cases of AIDS in the United States that will have caused 179,000 deaths. Sixty-five percent of the cases have been among homosexual and bisexual males, and twenty-five percent among people who abuse intravenous (IV) drugs. The number of cases among heterosexual adults is increasing; however, the proportion has remained a stable 4 percent. Because the epidemic continues to grow and because we have no vaccine and only one drug of limited effectiveness, AIDS has been declared public health enemy number one. The epidemic is not spreading like "wildfire," but that is no reason for complacency. The spread of HIV infection and disease worldwide is still by the three routes of transmission initially described; and in this country, the disease still affects primarily homosexual and bisexual men and IV drug abusers. It is contracted through sexual contact, inoculation of blood largely through sharing of contaminated needles, and perinatally by infants from infected mothers. Spread of

infection through blood transfusions, clotting factor concentrates, and organs which was once a major concern has been nearly eliminated. The infection cannot be contracted casually through normal household or workplace contacts or by being bitten by a mosquito.

CDC PREVENTION EFFORTS

CDC activities fall into two major categories: first, research to learn about the natural history, distribution, and spread of the disease; and secondly, prevention and control efforts that rely on information, education, and risk reduction activities.

Surveillance Activities

Surveillance of AIDS cases began in 1981. As a result of diligent efforts by State health departments with support from CDC, AIDS has been one of the most completely reported diseases in this country. However, a person can be infected with HIV for many years before coming down with AIDS. A considerable body of information has been collected on the extent of AIDS, the distribution of HIV infection, and the modes of HIV infection. Now that we have a well-proven licensed HIV antibody test which is in wide use, we are launching more widespread surveillance of HIV infection. We will be using data collected from 30 sentinel metropolitan areas and data on special ongoing

studies to provide information about the prevalence and trends of HIV infection in this country. Portions of the comprehensive HIV surveillance program are now in place and full operation will be reached by May 1, 1988. A report on this subject was given to the Domestic Policy Council on November 30, 1987; and I would like to provide a copy for the record.

Information, Education, and Risk Reduction Activities

Since the beginning--as far back as 1982 when the first AIDS guidelines were published--the PHS has been engaged in information and education activities. There has been cooperative work with State and local health departments and other organizations such as the American Red Cross. The PHS "Information/Education Plan to Prevent and Control AIDS in the United States" was issued in March 1987. With the addition of new initiatives, all the major components of the program--activities directed toward the public, school- and college-aged youth, persons at increased risk or infected, and health workers--were in place in 1987.

CDC has funded a variety of AIDS prevention programs directed primarily at persons at increased risk or who are infected. CDC supports 59 State and local health department AIDS prevention programs including the establishment and maintenance of community health education/risk reduction programs. Another element is support of counseling, testing, and partner notification

programs. Through counseling and testing, it is possible to deliver risk reduction messages directly to infected individuals and those at risk of becoming infected. Testing of people whose behavior increases their risk of HIV infection is encouraged in sexually transmitted disease (STD) clinics, drug treatment facilities, women's health clinics, tuberculosis treatment clinics, and in other medical facilities.

A cornerstone of the program directed toward the public was the intensive National Public Information Campaign that was initiated in October as AIDS Awareness and Prevention Month. This campaign which will continue during 1988 includes the distribution of public service announcements to television networks and radio stations across the country, the distribution of brochures and materials, and mobilizing active involvement in public and private organizations in the AIDS prevention efforts.

A school health education program to prevent the spread of AIDS was initiated in 1987 to help local school boards, parents, and school personnel plan, implement, and evaluate educational efforts to prevent morbidity and mortality due to HIV. It incorporates principles of AIDS education approved by President Reagan to enable schools and other organizations to determine AIDS education strategies that are consistent with community values and needs. In 1987, cooperative agreements were established with 42 national, State, and local education agencies and other organizations to help schools and other organizations to implement AIDS education for youth.

A special minority initiative exists because nearly 40 percent of reported AIDS cases occur among blacks and Hispanics. In 1987, CDC supported 41 State and local health departments community-based initiatives to prevent AIDS among minorities who are at risk of infection. During 1988, we will provide funds to as many as 30 national minority organizations for AIDS education and prevention activities.

CDC has provided health workers with guidelines and information to assist them in effectively participating in the fight against AIDS. To inform health workers about AIDS and HIV transmission, CDC provides scientific/technical information, training in the use of HIV laboratory tests, AIDS health education/risk reduction, counseling and testing, and providing information about AIDS in the workplace.

INTERNATIONAL ACTIVITIES AND RESPONSIBILITIES

Cooperation with the World Health Organization (WHO)

The urgent need for a global effort to combat AIDS is clear. The 1986-87 World Health Assembly charged WHO to provide leadership in the global struggle against AIDS. The CDC AIDS Program has been designated as one of the WHO Collaborating Centres for AIDS and HIV. In FY 1987, CDC AIDS Program staff, at the request of WHO, made 14 trips to WHO headquarters in Geneva to provide technical assistance.

Study of HIV Infection and AIDS in Africa

CDC is heavily involved in a major AIDS study in Kinshasa, Zaire which has led to a fuller understanding of the epidemiology of AIDS in Africa. This project is a collaborative effort between the Government of Zaire, CDC, the National Institutes of Health, the Armed Forces Institute of Pathology, and the Belgian Institute of Tropical Medicine. The project, which maintains a surveillance system and conducts epidemiologic studies, has determined how the disease is spreading in Central Africa.

The Zaire study has clarified the modes of transmission of HIV infection in infants, children, and adults in Africa. It has been determined that heterosexual contact accounts for 80 percent or more of the cases, blood transfusion and reuse of needles for 5-15 percent, and mother to child transmission for 5 percent or less. Identification of the quantitative importance of blood transfusions in the spread of HIV infection, particularly to children, has resulted in effective prevention programs to protect the blood supply in the largest city in Africa.

We have examined HIV strains isolated from different geographic locations. Genetic analysis of virus isolates from Zaire, the U.S. and other countries may be valuable in selecting strains for vaccine development.

The Zaire project implemented a protocol in September 1987 for evaluating the safety and efficacy of immunizations (BCG, DTP, OPV, measles vaccine) in HIV-infected and uninfected children. This has worldwide significance since inadequate immune response to vaccine antigens in these children could affect control of other infectious diseases.

International Technical Assistance and Collaborations

Other nations look to CDC as a source of expert technical assistance in disease prevention and control. The prevention and control of HIV infection is no exception. During 1987, CDC provided assistance in the development of national AIDS plans for a number of countries including Columbia, Haiti, Panama, Rwanda, and The Sudan. In Rwanda we provided consultation in helping develop AIDS laboratory testing capability. We assisted the Pan American Health Organization by investigating the prevalence of HIV infection in plasma collected from paid donors in Mexico. We have collaborated with WHO in developing prototype protocol and data collection instruments for use in planning national programs to measure high-risk sexual behaviors in various populations. Training in AIDS surveillance was provided to Australia, Canada, France, and the United Kingdom. We have conducted training in serodiagnosis of HIV infections in Brazil, Mexico, and Egypt.

CDC has worked closely with scientists and public health officials from other nations. These activities include cosponsoring and participating in the first three international AIDS symposia in Atlanta, Paris, and Washington and international conferences on AIDS in Africa conducted in Naples and Nairobi. Scientific collaborative efforts are underway or near completion with scientists in France, Canada, Brazil, Zaire, Ivory Coast, and other countries.

Immigration Responsibilities

Under the authority of the Immigration and Nationality Act and the Public Health Service (PHS) Act, the PHS has promulgated the Medical Examination of Aliens Regulations. These regulations outline the scope of the medical examination and identify the communicable diseases which are included on the list of "Dangerous, Contagious Diseases" for purposes of determining eligibility for visas. On August 30, 1987, the regulations were amended by adding HIV infection to the list of "Dangerous, Contagious Diseases." This action was approved by President Reagan. As a result, the Department of State will deny visas, and the Immigration and Naturalization Service will deny admission of aliens with HIV infection who are subject to medical examination (such as persons seeking permanent residency). The screening of foreign nationals seeking entry into the United States for permanent residence began on December 1, 1987.

I will be happy to answer questions that you and the other members of the Committee may have.

"INTERNATIONAL EFFORTS IN AIDS RESEARCH AT THE
NATIONAL INSTITUTES OF HEALTH"

Statement of

ANTHONY S. FAUCI, M.D.

Director

National Institute of Allergy and Infectious Diseases
National Institutes of Health

before the

COMMITTEE ON FOREIGN RELATIONS
UNITED STATES SENATE

December 9, 1987

Mr. Chairman, members of the Committee, I am addressing you as the coordinator of AIDS research for the National Institutes of Health (NIH). The NIH is responsible for carrying out basic and clinical research on the acquired immunodeficiency syndrome (AIDS). The NIH's AIDS research program involves a many-faceted strategy for providing tools in the battle against AIDS both here and abroad. Therefore, there are a number of specific research programs and individual projects funded through the NIH that are international in scope. Most of these projects which have a foreign focus or component seek to answer questions on the natural history of the disease and the mechanisms through which the human immunodeficiency virus (HIV) causes disease. In addition, the NIH has a number of collaborative efforts between U.S. and foreign scientists that address a broad range of basic and clinical questions.

OVERVIEW

The NIH AIDS research efforts can be divided into 5 major scientific categories: 1) epidemiology and natural history, 2) the etiologic agent, 3) pathogenesis (how the virus destroys the body's defenses), 4) the development and testing of anti-retroviral therapies and immunologic reconstitution (therapies to build up the damaged immune system), and 5) vaccine development and evaluation. A number of key advances have been made in each of these categories at a pace that is unprecedented in the history of biomedical science. The epidemiology and natural history of the disease have been well described, although the long-term natural history of infection with the HIV remains to be delineated due to the fact that the disease itself has only been recognized since 1981.

Within a few short years after the recognition of AIDS, NIH-supported research, in collaboration with French investigators at the Pasteur Institute, has resulted in the identification of HIV as the etiologic agent. Furthermore, the virus has been isolated and cloned; its genes have been identified, sequenced and their functions delineated. Although the precise mechanisms of pathogenesis have not been precisely determined, scientists have made significant advances in this area.

Drug Development and Evaluation

Of particular interest are the advances made in drug development and evaluation. The NIH has initiated a major effort in the area of drug development. This effort takes the form of screening large numbers of existing compounds for activity against HIV as well as a targeted approach to the development of anti-HIV drugs using knowledge of the critical functions and/or structures of the virus to guide the research direction. Widespread screening of drugs resulted in the discovery of the anti-HIV properties of azidothymidine (AZT) by NIH scientists, in collaboration with the Burroughs-Wellcome Company. AZT is the first, and at this point, the only drug that is licensed for use in the treatment of AIDS in this country. Although AZT is not a cure, it clearly has had a major effect on the survival of AIDS patients, and it is currently being tested alone and in combination with other agents in a variety of categories of HIV infection. In this regard, the National Institute of Allergy and Infectious Diseases (NIAID) has funded 19 AIDS Treatment Evaluation Units at medical centers throughout the country which are currently conducting clinical trials on a number of therapeutic agents.

In addition to anti-HIV therapies, the NIH is also investigating ways to bolster the HIV-damaged immune system as well as treat the myriad of opportunistic infections that afflict people with AIDS. Immunological reconstitution is still in the highly experimental stage; however, this approach together with specific anti-retroviral therapy provides a potential two-pronged attack aimed at suppressing virus replication at the same time that the damaged or destroyed immune system is being rebuilt.

Vaccine Development

Finally, major efforts have been directed towards vaccine development. Several candidate vaccines are currently being studied in the test tube and in animal models. In August 1987, the Food and Drug Administration (FDA) approved a candidate vaccine for phase I testing in humans to determine safety and immunogenicity (whether the vaccine induces antibodies and cellular responses against the virus). These studies are being carried out at the NIH in Bethesda, MD. Collaborative studies exist with several NIH researchers and their European counterparts, which have resulted in the production of various vaccine preparations and planning for initial human trials. In addition, the FDA has just approved a second candidate AIDS vaccine for testing in humans. It is important to point out that these are only first steps in the long and difficult process of developing a safe and effective vaccine against HIV. Even if this or other candidate vaccines ultimately prove to be safe and effective, it is almost certain that it will not be until the mid-1990s that a vaccine will be widely available to the public. Nonetheless, it is remarkable that vaccines are being tested merely 3 years after the etiologic agent of AIDS has been identified.

INTERNATIONAL RESEARCH EFFORTS

As previously mentioned, there are a number of projects currently under way in which scientists at the NIH or at institutions we support are working in countries where HIV infection is known to be widespread, particularly in many parts of Africa and the Caribbean. Project SIDA (the French acronym for AIDS) is a multidisciplinary study based in Kinshasa, Zaire. It was initiated jointly in 1984 by the NIH, the Centers for Disease Control (CDC), the Institute of Tropical Medicine, Antwerp, Belgium, and the Zairian Ministry of Health to study AIDS in Zaire. Data from this project have clearly demonstrated heterosexual transmission of AIDS from male-to-female and female-to-male. Similar studies supported by the NIH on the natural history of the disease, modes of transmission and nature of the virus are under way in various populations in Kenya, Rwanda, Ghana, and the Sudan. Additional NIH mechanisms support collaborative and contractor studies with several European and African countries.

Research programs on AIDS that are ongoing in the Caribbean include studies not only on HIV, but also on HTLV-1 infection (HTLV-1 is distantly related to HIV and causes a lymphoid form of cancer and a severely disabling progressive paralysis when the virus affects the spinal cord), and studies on the effect of HIV infection on pregnancy outcome and on the transmission of HIV to the sexual partners and children of Haitian AIDS patients. In addition, NIAID has begun a collaborative effort with the Pan American Health Organization (PAHO) to study AIDS in the Caribbean. Through this program, further studies on AIDS transmission and natural history in Haiti are being performed and, in Trinidad, scientists are examining genetic factors that influence HIV acquisition and disease expression. With support

from the NIH, PAHO's Caribbean Epidemiology Center (CAREC) has established a specialized research facility to support studies on the natural history and epidemiology of AIDS in the countries represented by CAREC's 19 participating governments.

The NIH is also encouraging international research on AIDS by strengthening scientific linkages between U.S. and foreign investigators. To facilitate this, the NIH is awarding grants to U.S.-based institutions to establish programs for International Collaboration in AIDS Research (ICAR). These programs will link U.S. institutions to research units at overseas sites resulting in collaborative efforts in biomedical research. The major portion of ICAR research will be conducted in the foreign country. Perinatal and pediatric HIV infections and heterosexual transmission of HIV are of special interest in the ICAR program. Another area of research emphasis is the variability in HIV isolates in different geographic areas and the correlation of those variations with clinical and epidemiologic resistance factors. In addition, these ICAR grants will focus on the potential role of cofactors for disease development and on the geographic similarities and differences in the clinical and epidemiologic presentation of disease.

To promote further international scientific cooperation in combating AIDS, the NIH will launch, in FY 1988, the International Postdoctoral Research Program in AIDS. This program will support collaborative research between U.S. and foreign scientists who wish to enhance their knowledge and skills in AIDS research, and to stimulate cooperation and information exchange.

AIDS research has also been formally and informally added to a number of U.S.-foreign collaborative biomedical research programs. For example, the NIH has recently added an AIDS Panel to the U.S.-Japan Cooperative Medical Science Program. AIDS has also been added as an area of emphasis to the NIH-INSERM (France) agreement for Cooperation in the Biomedical Sciences and a number of AIDS-related meetings and collaborative projects have been initiated under the U.S.-German Agreement on Cooperation in Biomedical Research and Technology. In these cases, the agreements foster exchange of information among scientists and development of collaborative research projects.

Under existing agreements, clinical protocols for NIH-sponsored drug evaluation studies have been provided to German and French scientists to assist in the development of protocols that would provide data comparable to that obtained in U.S. trials. In this regard, in 1987, the NIH initiated a multicenter study of the pulmonary complications of HIV infection in 5 centers in the U.S. This program has been expanded to include research institutions from both Germany and France that will participate in the design and implementation of these studies and will enroll patients in standardized protocols.

The NIH has also promoted international collaboration in AIDS research through its extensive involvement in the series of International Conferences on AIDS, which are held annually. In 1987, the NIH sponsored a "Workshop on AIDS in Africa" to review selected research projects and to provide a forum for discussion of the future direction and focus of AIDS research in Africa.

The NIH has a close working relationship with the World Health Organization (WHO) and with the staff of its AIDS Program. The NIAID has

been designated a WHO Collaborating Center for AIDS and participates in frequent meetings. It will, in the future, be providing scientific advice and, in some cases, research reagents to WHO and to WHO-sponsored investigators.

It is anticipated that scientific collaboration between the NIH and scientists in other countries will continue and increase as knowledge about this disease increases and as the incidence of disease in these other countries grows. It is likely that specific studies, in addition to natural history and epidemiology research, will have to be done outside the United States.

In summary, the NIH research effort on AIDS is directed at a disease that knows no geographical boundaries. Our extensive research program on AIDS, combined with our international collaborative projects, represents a multifaceted approach towards fighting this global epidemic.

This concludes my prepared statement, Mr. Chairman. I will be pleased to answer any questions you and the members of the Committee might have.

Statement of

THOMAS J. ALLRED, M.D.
Chief of Pathology
Doctor's Hospital, West Palm Beach, Florida

Mr. Chairman and members of the Committee, I am honored to be here in such distinguished company. The witnesses you have heard and others you will hear this afternoon are nationally and internationally recognized experts in the field of AIDS research. I, by contrast, am a generalist. I am a Board certified pathologist and presently serve as Chief of Pathology at a medium-sized community hospital in South Florida. I am also Board certified in Emergency Medicine and worked for a number of years in that specialty. The perspective that I bring is, therefore, quite different from that of the researchers and academicians from whom you have heard or will hear. I have been asked to testify on the impact of AIDS on the medical community at large and the specific concerns that we as community physicians have with regard to the current global pandemic of AIDS.

It would be presumptive for any one individual to try to speak for all of American medicine but I can, I think, give you some understanding of our feelings as practicing physicians in one community in which AIDS is viewed as a major problem. I practice in Palm Beach County, Florida; Florida has the third highest incidence of AIDS in this country, following New York and California, and our county has the third highest incidence of AIDS in the state. This

year, 1987, we will have almost 200 new cases of AIDS in our county, which is approximately 1% of the national total. In sharp contrast to national figures of 3-4% of all cases being in heterosexuals and representing presumed heterosexual transmission, in Palm Beach County this year the percentage of heterosexual cases will have risen to 12.5 % of all our cases. That is one case in eight. In addition to heterosexual transmission, homosexual transmission and transmission by drug use, we also have a large immigrant population which is contributing to our high incidence.

The attitude of the medical community ranges from deep concern to fear; for most physicians caution is the order of the day in all patient contacts. I was shocked to recently discover that disposable latex and vinyl gloves are not currently available in our community; there is a four month back order from all suppliers. Production and supply themselves have not diminished, but, rather, usage has soared tremendously as health care workers of all disciplines attempt to insulate themselves from potentially infectious tissue or body fluid contact.

While I am not personally aware of cases of AIDS sufferers or HIV infected individuals being denied care in our community, I am aware that many physicians, including myself and my colleagues, increasingly use a subtle form of what might be called cost-benefit analysis in patient care settings. We ask ourselves, "Does the possible benefit to the patient out-weigh the potential risk to me and our other health-care workers?" In fairness, at this time, the answer is usually "yes," but not always, and it may not remain that

way. May I offer a personal case in point? I am a member of the largest group of pathologists in Florida; we provide laboratory services at 12 major community hospitals in South and Central Florida. We have adopted a policy of not performing autopsies on AIDS deaths, except under the most exceptional circumstances. We simply feel facilities are not adequate in our community hospitals to safeguard us, our assistants, and other such as housekeeping personnel who aid in the cleanup. This same feeling may eventually extend to the operating room, endoscopy suites, radiology and other patient care areas, especially if the incidence of AIDS and HIV positivity continues to soar.

It is the very uncertainty of the situation that is of most concern to us as practicing community physicians. All too often we do not know that a patient has AIDS or is HIV positive until they have been hospitalized for some time. The affected individual's assumed right to privacy or confidentiality may be a protection for them, but it certainly does not protect us as health care workers. Some time ago I was asked by our Chief of Surgery to begin testing all pre-operative patients for the presence of HIV. Other surgeons have made the same request since that time. Following the recommendations of the CDC I have counseled against that practice at this time, but pressure continues to mount.

Our infection control committee recently established a policy of employing AIDS precautions on all patients, in as much as for the present, we do not know which patients may or may not have HIV infection. Physicians in our community are

very concerned about the inroads that HIV may be making into our community heterosexual population at large. As I previously noted about 12% of cases of AIDS in our country this year are in heterosexuals, and the percentage of new HIV positivity in heterosexuals may even be higher. To us as practicing physicians the confirmation of HIV positivity and the clinical diagnosis of AIDS both carry the same ultimate significance-- both are absolute death sentences-- it is only a question of time.

Many of us deeply fear that the Central African experience is beginning to be repeated in South Florida, that HIV infection is being transmitted heterosexually at a significant level, and that we are now on the lower, "flatter" levels of geometric curve that may eventually lead to infection of a significant fraction of our population.

We find it grimly ironic that the CDC has required, through the Public Health Service, that HIV infection or, in other words, laboratory confirmation of HIV positivity, be added to the list of "Dangerous and Contagious Diseases" which causes the Immigration and Naturalization Service to deny thus affected aliens admission to the United States. The irony is that, to my knowledge, the CDC has not made the same recommendation to state public health departments-- that HIV positivity be reported to them by physicians as a "Dangerous and Contagious Disease." We do not report it to the state in Florida and, indeed, in California, where I did most of my Emergency Medicine practice, it is a crime for a health care professional to report HIV results to anyone but the patient and all HIV testing must be done in an "encoded"

fashion. I personally view that as an outrage! It seems that in that regard the health care system has become captive to the preferences of a few at the expense of the needs of the many. Certainly it is the perception of many physicians at my level that the government agencies entrusted with protecting the public health are doing too little and perhaps too late.

I hope that my remarks have been of some assistance to you in assessing the impact of the global AIDS epidemic on the practicing medical community. I will be happy to answer any questions that you or other members of the Committee may have.

Prepared Statement of Dr. St. John

The epidemic infection with the human immunodeficiency virus is now global in scope. Both industrialized and developing countries are affected. The numbers of reported cases of AIDS in countries reporting AIDS have continued to increase dramatically. As of 11 November, 1987, 64,488 AIDS cases have been officially reported to the World Health Organization from 127 countries. However, this number represents only a fraction of the estimated 100,000 to 150,000 cases of AIDS which have occurred to date. WHO estimates that between 5 and 10 million persons may be currently infected with human immunodeficiency virus or HIV -the virus which causes AIDS. In the Americas, excluding United States and Canada, at least 500,000 people are infected in Latin America and the Caribbean. By 1991, WHO estimates that at least one million new cases of AIDS could develop in people already infected with HIV.

This epidemic is an unprecedented threat to global health. This epidemic is just beginning: its ultimate magnitude and impact are difficult to estimate. This epidemic will require all people of all countries to mobilize national and international energies, resources, creativity and commitment. Each country must undertake a series of immediate priority actions and develop long term strategies to stop the spread of AIDS. At the same time all countries must maintain respect for human rights and dignity.

Although no definitive control methodology such as a vaccine or effective therapy is at hand, enough is known about this virus to control its spread and to interrupt its transmission. Yet it must be recognized that control will be most difficult and costly.

A review of a world-wide situation is important so that the global Special Program on AIDS (SPA) can be placed in perspective.

AIDS has been reported from every part of the world. The largest number of cases, 43,533, have been reported in the United States, where the disease was first recognized in 1981. In 40 other countries in the Americas a total of 6,259 cases have been reported to the Pan American Health Organization (PAHO). In Europe, where 27 countries have reported 7,512 AIDS cases, most countries are now considered to be facing an epidemic. WHO estimates that 500,000 to one million persons in Europe are infected with the AIDS virus. Highest per capita cases of AIDS have been found in Switzerland, Denmark, France and Belgium. WHO estimates that there will be 25,000 new cases of AIDS in Europe by the end of 1988.

In Africa the number of countries reporting AIDS to WHO has increased substantially in the past year. As of 11 November, 37 African nations have reported 6,298 cases of AIDS. Due to underreporting and underdiagnosis, the true number may be 10 times this many.

In Asia, 18 countries have reported 208 cases of AIDS. Many of those cases are linked to persons who have been in areas where AIDS is more prevalent. Oceania (including Australia and New Zealand) has reported 678 cases.

To date, the world has tracked the course of this epidemic by monitoring the total number of accumulated cases since 1981, the start of the epidemic. The total number of cases is used in many circles to make comparisons between countries and undue attention is attracted by those countries reporting a large number of cases, eg., USA, Brazil, France, Haiti. The comparisons are invalid and misleading because they do not consider the size of the populations which give rise to the AIDS cases. No ideal approach has yet been

developed to make comparisons between countries, but PAHO has utilized one method to estimate incidence involving the calculation of the ratio of reported cases for a given calendar year to the mid-year population estimate for that year. As an example, Table 1 presents the case ratios for the major subregions of the Americas. The Caribbean subregion is second only to the North American region. Yet even these averages obscure significant differences between the countries. Table 2 shows the case ratios for individual countries reporting 10 or more cases in the Americas in 1986. Again, several Caribbean countries are contributing a disproportionate number of cases for their population sizes. These numbers are influenced by the completeness of reporting, the relative magnitude of the population size and other complex factors. Yet they are important to identify countries where more detailed investigation of the AIDS situation should be undertaken.

There is severe underreporting due to the failure to detect cases and problems meeting the fairly strict case definition criteria established by WHO and which has been revised three times in four years. There is also some confusion of cases of AIDS with persons infected by the AIDS virus. In the Americas the actual number of AIDS cases may be two to four times the reported number.

How far has the virus penetrated the general population? The answer is unknown. Seroprevalence studies throughout the world are incomplete and somewhat fragmented. Nevertheless, scattered evidence indicates that the problem may be severe in many countries. In Africa, in some areas, 5 to 10% of pregnant women have been reported as HIV seropositive. In some selected populations the seroprevalence rate may be as high as 35 to 40%. In high risk populations such as prostitutes, the rate is much higher. The disease is more concentrated in urban areas and less frequent in rural populations.

In the Americas, in Haiti, approximately 50% of the prostitutes are now infected. In the Dominican Republic, 1.5% to 2% of the blood donors are infected. In Mexico, in paid blood donors recruited in some private blood banks, the prevalence of infection reached nearly 50%, and Mexico took the courageous step of closing all private blood banks. In certain countries of the Americas, Europe and Australia, most AIDS cases occur among young, 20-49 year old homosexual or bisexual men and intravenous drug users. However, in some countries, such as Haiti, the Dominican Republic, Guatemala, Honduras and many Caribbean islands, the male-female ratio is less than 6 to 1, that is, intermediate between the African and the North American ratios. Preliminary data may indicate that in some countries transmission may be shifting from the homosexual-bisexual population towards the heterosexual population.

In country after country the epidemic curve is beginning to resemble the curve for the United States. There is an initial slow rise in the number of reported cases followed by a rather dramatic and sudden increase as the epidemic becomes established.

Further spread of this disease is certain. Infection is for life. A long incubation period which may last from 5 to 10 years creates an AIDS symptomatic but infectious carrier state. This disease spreads sexually and from mother to child. These modes of transmission involve some of the most fundamental aspects of human behavior, behaviors which are essential for life itself. In addition, transmission involving blood and blood products further guarantees that nearly all segments of society may experience some risk of exposure during a lifetime.

Despite considerable research, a vaccine may be further away than was thought a year ago. In addition, a cure for AIDS is still lacking. In the

absence of a vaccine, or effective cure or treatment, education and information on how to avoid AIDS remain the key to controlling spread.

AIDS education poses particular challenges to public health. AIDS is primarily a sexually transmitted disease. Abstinence or monogamy offer the only complete protection against transmission. In their absence, condoms offer the best protection against HIV infection. Yet in many countries and societies, condoms are frequently not available or are not widely used and may not be culturally acceptable. In addition, prostitution often plays an important role in some cultures. In the past, attempts to change individual sexual behaviour which is often engrained in certain cultures have proved difficult within the context of other sexually transmitted disease control programs. The problem is complicated by cultural values and, in some developing countries, limited levels of education especially among the poorest segments of society.

As a result, this disease may seriously impact upon the gains already achieved throughout the world in health status. For example, poverty related diseases may well increase and threaten to intensify the impact of AIDS in developing countries. Tuberculosis is a very serious problem in areas where housing conditions and nutrition are poor, and studies indicate that a person infected with both HIV and tuberculosis is more likely to develop active tuberculosis. Such a person therefore spreads not only AIDS but also becomes a source for new cases of tuberculosis. As a final result, the gains made by tuberculosis control programs may be quickly lost.

In some countries which are heavily affected by AIDS, gains made in the reduction of infant mortality may soon be lost. The spread of AIDS from mothers to newborns is rapidly contributing to infant mortality. Furthermore, the disease itself threatens to aggravate poverty since it primarily kills men

and women between the ages of 20 and 49. These persons are the responsible economic producers who provide for both younger and older generations and contribute to the economic and social development of their communities. Their illness and death means loss of productivity, human capital and support for children and the elderly. Furthermore their care will deplete already scarce resources for both their families and health care systems.

Further development of third world countries may be limited by the fear that international travel will expose people to AIDS or contribute to its spread. Foreign workers must prove that they are not infected in order to gain entry to some countries in order to work on development projects. Foreign students have been required to undergo tests for HIV infection in selected countries. The United States now requires all permanent immigrants and persons applying for residency status to be tested and be found negative for the AIDS virus. International business may be hurt by AIDS fears as skilled workers and business men and women from developed countries refuse to travel to developing countries for fear that they may be transfused with infected blood when they sustain an industrial accident. Such situations, may have serious negative impact on many developing country economies. Finally, a growing list of national restrictions may seriously inhibit international movement and commerce.

Global Activities of the WHO Special Program on AIDS

One year ago, in November 1986, the Special Program on AIDS had still to be created. Today, having received strong support from both within and outside of the United Nations System, the Special Program is actively coordinating and directing the global fight against AIDS. Since February 1, 1987, a great deal has been accomplished.

- . The global dimensions of AIDS are now recognized.
- . The scientific work on HIV and AIDS is permanently and irrevocably international.
- . The energies, commitment and creativity of many people -within WHO, and many countries throughout the world, in donor agencies and in many multilateral and non-governmental agencies- have been catalyzed and directed towards prevention and control.
- . The Global AIDS plan has been designed, the funding to begin its implementation has been provided, and the support of all countries has been marshalled behind WHO as the directing and coordinating agency in this global fight against AIDS.

A remarkable constellation of people and institutions has enabled the Special Program on AIDS to accomplished its considerable work. This work is outlined in the First and Second Progress Reports appended to this testimony.

Over 200 people have made extraordinary personal commitments of time and effort to the work of the Special Program. As members of the growing permanent staff, as short term consultants, as participants in expert committees, these individuals have travelled to over 90 countries and have made exceptional efforts in the service of AIDS control.

During the Special Program's first six months, support to national AIDS programs has received the highest priority. As a result, the program has provided an exceptional level of technical and financial support to national AIDS programs in all continents. At the same time the program has continued, and even accelerated, its global activities. This initial support to national AIDS programs has been carried out in 93 countries with 34 more scheduled by the end of the year. In concert with the Special Program on AIDS, 58

countries have completed short term (six to 12 month) plans, and 25 countries have completed medium term (3 to 5 year) plans. National AIDS committees have been established in 151 countries.

The goals of the WHO Special Program on AIDS are to:

- Prevent AIDS virus transmission;
- Care for AIDS virus infected people;
- Unify national and international efforts against AIDS.

The global AIDS strategy of the Special Program on AIDS has been endorsed by the World Health Assembly, the United Nations General Assembly, the Economic and Social Council of the United Nations and the Venice Economic Summit Meeting of June 1987.

Global activities have included 32 technical scientific meetings and consultations on global research and policy issues and over 30 consensus statements, reports, guidelines and articles on subjects including criteria for screening for HIV, advice on international travel, safety of blood and blood products, and guidelines for AIDS prevention and control.

To date the Special Program on AIDS has made \$18.9 million available for national program support in 1987. A total of US\$21 million in bilateral aid has also been pledged for full funding of the first year of national AIDS program operations in Uganda, Tanzania, Rwanda, Kenya, and Ethiopia. A donor's meeting was organized to address the special problems in the Caribbean. In addition, 24 more meetings for mobilizing support for specific national programs are planned.

The WHO Special Program on AIDS has begun extensive collaboration with research institutions, U.N. agencies and non-governmental organizations. It

has also undertaken a large scale information effort regarding the Program's activities and HIV prevention and control through collaboration with the media.

The 1987 budget for these activities is US\$25 million which has been provided by development aid authorities from ten nations in Europe and North America. Of all funds, over three quarters (77%) go to national program support. For 1988 it is estimated that the program will require US\$66.2 million. The program currently has a worldwide staff of over 60 professional and support personnel.

The key strategy of the Special Program on AIDS is collaboration with member countries for the development of national AIDS prevention and control programs. These programs have six components which include: 1) the formation of a national AIDS committee or commission and an appropriate program infrastructure to provide leadership and direction for the program; 2, initial assessment of the magnitude of the spread of AIDS in selected population groups through seroprevalence surveys; 3) the development of on-going, intensive surveillance with appropriate laboratory support; 4) training of all levels of health care workers to eliminate ignorance and fear of dealing with AIDS; 5) the implementation of prevention measures which include intensive health education for the general population as well as special, high risk subgroups and securing the safety of blood products used in the countries; and 6) plans for the care of HIV infected persons and AIDS patients.

The Regional Offices of WHO are fully participating components of the Special Program on AIDS. For example, the Pan American Health Organization (PAHO), as the Regional Office for the Americas, executes the Special Program on AIDS in the Americas.

PAHO's program has two major elements: 1) technical support for national AIDS prevention and control programs, and 2) the promotion and conduct of epidemiological studies and related research in collaboration with national researchers. The PAHO/WHO program has already mobilized nearly 2 million dollars from WHO's non-regular funding sources for AIDS prevention and control activities in this Region. In countries where there has already been epidemiological and political recognition of the HIV problem, the PAHO/WHO Special Program on AIDS has provided technical assistance and financial support for the formulation and execution of national programs. This work will be strengthened and broadened to assist these and other member states already engaged in dealing with HIV. An additional 5 million dollars has been obtained for AIDS research in Latin America and the Caribbean through a contract between PAHO and the U.S. National Institutes of Health. This contract emphasizes perinatal and heterosexual transmission research as well as studies of the interaction of AIDS infection with other endemic diseases. It also includes investigation of the magnitude of infection with the virus in multiple segments of society.

The AIDS problem has been approached in a manner which will permit the accomplishment of as much as possible, as quickly as possible. Certain protocols and certain bureaucratic procedures have been bypassed or eliminated. Given the urgency of the HIV pandemic, WHO believes that it cannot follow traditional "business as usual" approaches. The future depends on what is done today. WHO has made a commitment to its member countries, which in turn, must commit themselves to this unprecedented epidemic.

AIDS IN THE AMERICAS
THE SITUATION

PAN AMERICAN HEALTH ORGANIZATION
30 November 1987

PAHO/WHO Special Program On AIDS
Health Situation And Trend Assessment Program

AIDS cases and deaths reported to PAHO/WHO

As of 30 November 1987

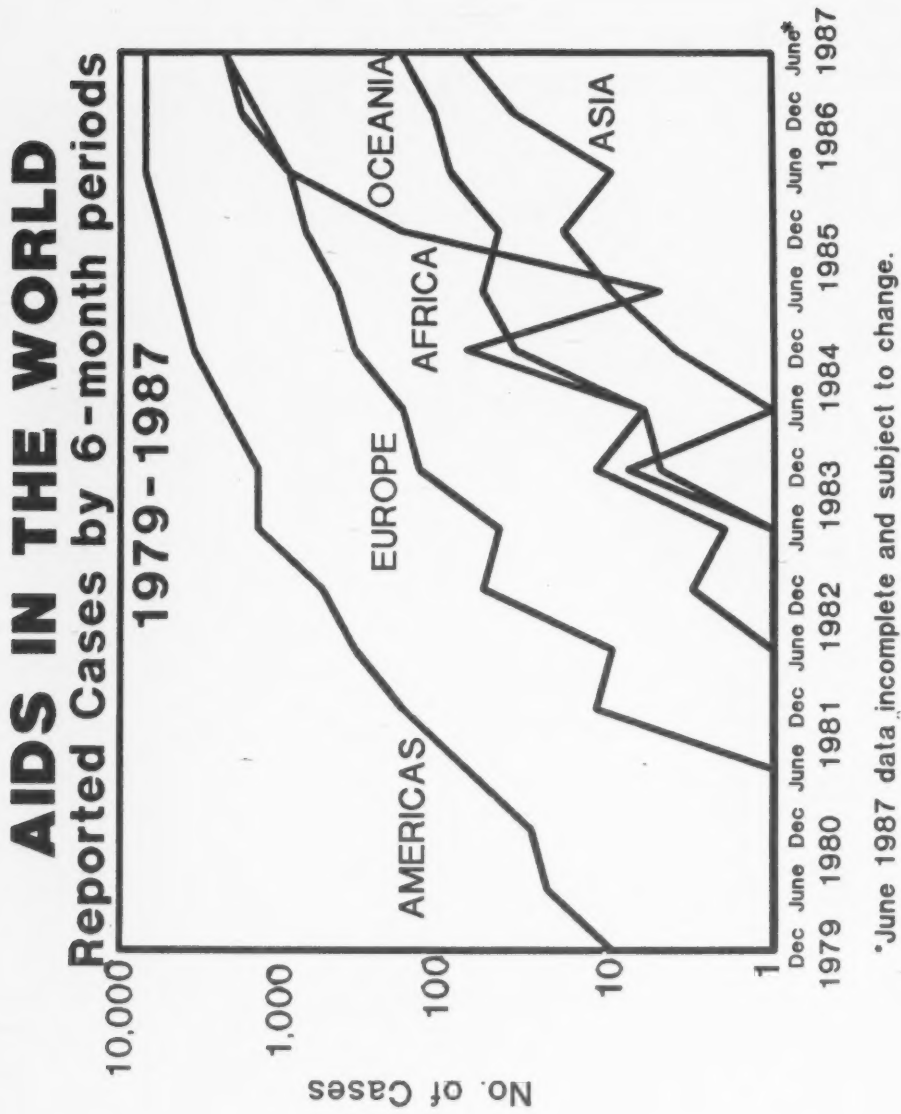
Total number of cases reported
52,908

Total number of deaths reported
29,192

Number of countries reporting
48

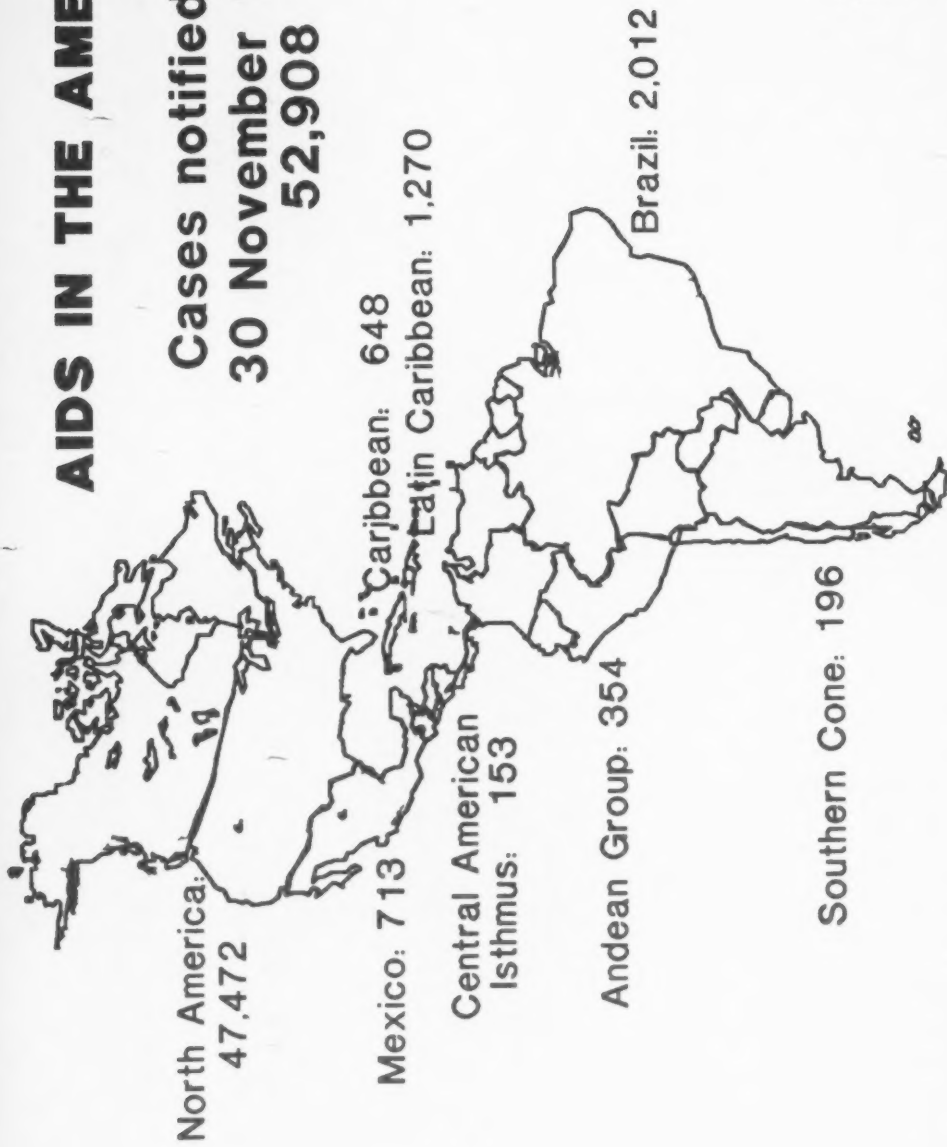
Number of countries not reporting
0

Number of countries reporting
ten or more cases
27



AIDS IN THE AMERICAS

Cases notified by
30 November 1987
52,908



11/30/87

CUMULATIVE REPORTED AIDS CASES AND DEATHS
FOR SUBREGIONS AND COUNTRIES OF THE AMERICAS

	CASES	DEATHS	Period of 1st Report	Period of Last Report
ANDEAN AREA	354	164		
Bolivia	4	2	31 Dec 85	30 Sep 87
Colombia	153	53	31 Dec 86	30 Sep 87
Ecuador	52	6	31 Dec 85	30 Sep 87
Peru	44	29	30 Jun 82	30 Sep 87
Venezuela	101	74	31 Dec 84	30 Sep 87
SOUTHERN CONE a)	196	94		
Argentina	120	59	31 Dec 83	30 Sep 87
Chile	56	23	31 Dec 84	30 Sep 87
Paraguay	6	4	31 Dec 86	30 Sep 87
Uruguay	14	8	31 Dec 83	30 Sep 87
BRAZIL	2,102	1,044	30 Jun 82	30 Sep 87
CENTRAL AMERICA	153	102		
Belize	2	2	31 Mar 87	30 Jun 87
Costa Rica	39	21	31 Dec 83	30 Sep 87
El Salvador	12	6	31 Dec 85	30 Jun 87
Guatemala	30	28	30 Sep 86	30 Sep 87
Honduras	48	27	30 Jun 85	30 Sep 87
Nicaragua	0	0	30 Sep 87	30 Sep 87
Panama	22	18	31 Dec 84	30 Sep 87
MEXICO	713	177	30 Jun 81	30 Sep 87
LATIN CARIBBEAN	1,270	278		
Cuba	6	3	31 Dec 86	30 Sep 87
Dominican Republic	352	38	31 Dec 85	30 Sep 87
Haiti	912	237	31 Dec 83	30 Sep 87
CARIBBEAN b)	648	364		
Anguilla	2	0	31 Mar 87	30 Sep 87
Antigua	3	3	31 Dec 85	30 Sep 87
Bahamas	126	56	31 Dec 85	30 Sep 87
Barbados	52	30	31 Dec 84	30 Sep 87
Cayman Islands	2	2	31 Dec 85	31 Mar 87
Dominica	5	3	31 Mar 87	30 Sep 87
French Guiana	93	70	31 Dec 86	30 Sep 87
Grenada	6	5	31 Dec 84	30 Jun 87
Guadeloupe	51	28	31 Dec 86	30 Jun 87
Guyana	5	2	30 Sep 86	30 Sep 87
Jamaica	30	20	30 Jun 86	30 Sep 87

.../

(Cont.)

CUMULATIVE REPORTED AIDS CASES AND DEATHS
FOR SUBREGIONS AND COUNTRIES OF THE AMERICAS

	CASES	DEATHS	Period of 1st Report	Period of Last Report
Martinique	27	17	31 Dec 86	30 Jun 87
Montserrat	0	0	30 Jun 87	30 Sep 87
Netherlands Antilles	18	10	31 Mar 87	30 Jun 87
Saint Lucia	6	3	31 Dec 84	30 Sep 87
St. Christopher-Nevis	1	0	31 Dec 85	30 Sep 87
St. Vincent and the Grenadines	5	2	30 Jun 85	30 Sep 87
Suriname	6	5	30 Jun 84	30 Sep 87
Trinidad and Tobago	199	106	30 Jun 83	30 Sep 87
Turks and Caicos Islands	4	2	31 Dec 86	30 Jun 87
Virgin Islands (UK)	0	0	31 Mar 87	31 Mar 87
Virgin Islands (US)	7	0	31 Mar 87	30 Sep 87
NORTH AMERICA	47,472	26,969		
Bermude	70	50	31 Dec 84	30 Sep 87
Canada	1,326	699	31 Dec 79	2 NOV 87
United States of America c)	46,076	26,220	31 Dec 80	16 NOV 87
TOTAL	52,908	29,192		

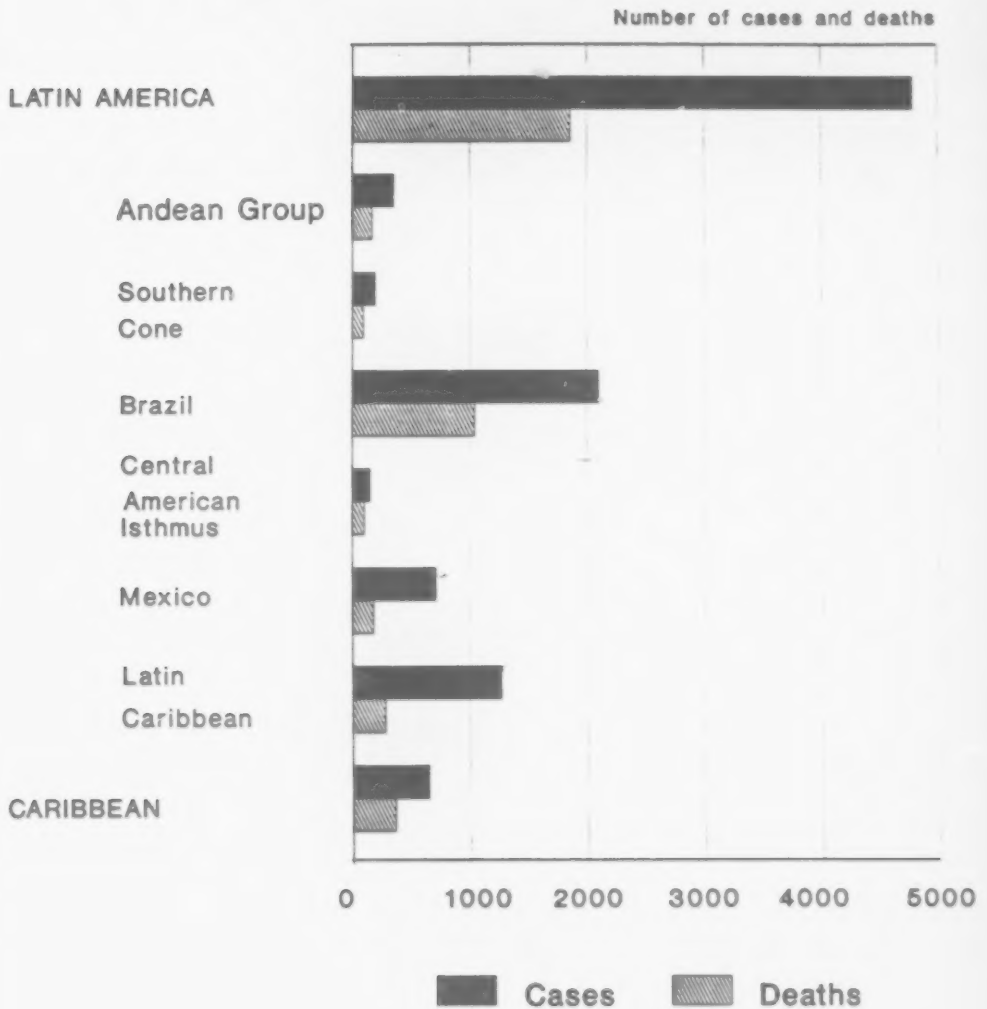
a) Includes Falkland Islands.

b) Caribbean Region includes French Guiana, Guyana, and Suriname.

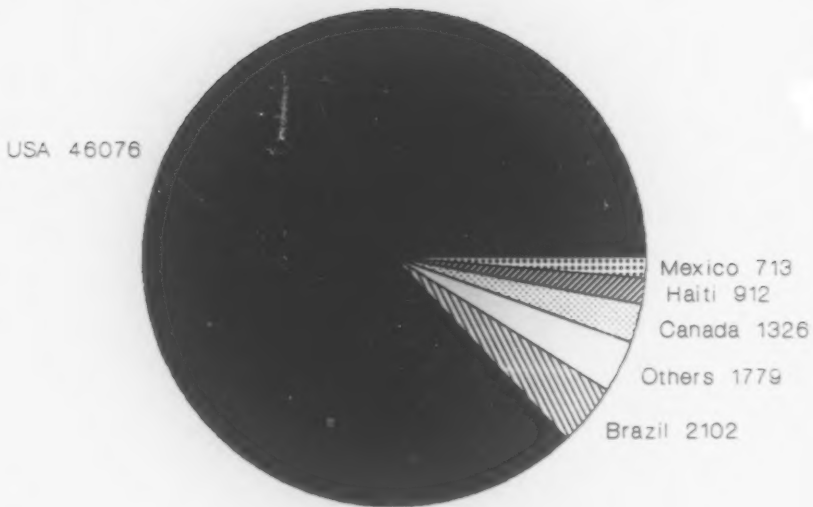
c) Includes Puerto Rico.

AIDS IN THE AMERICAS

Cases And Deaths Reported By Subregion*
Notified By 30 November 1987

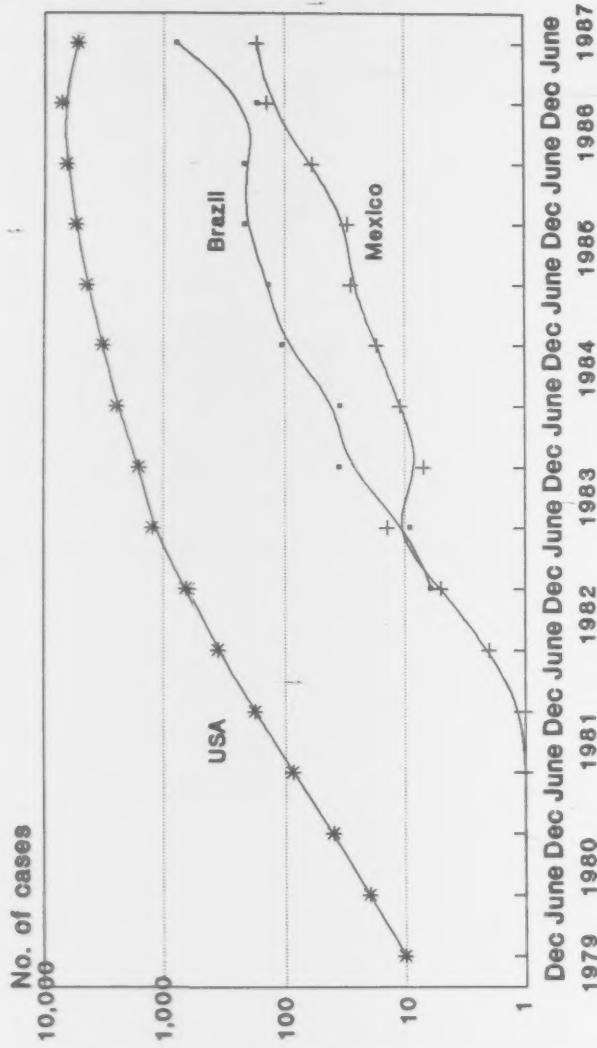


AIDS IN THE AMERICAS
Number of reported cases by country
Notified By 30 November 1987

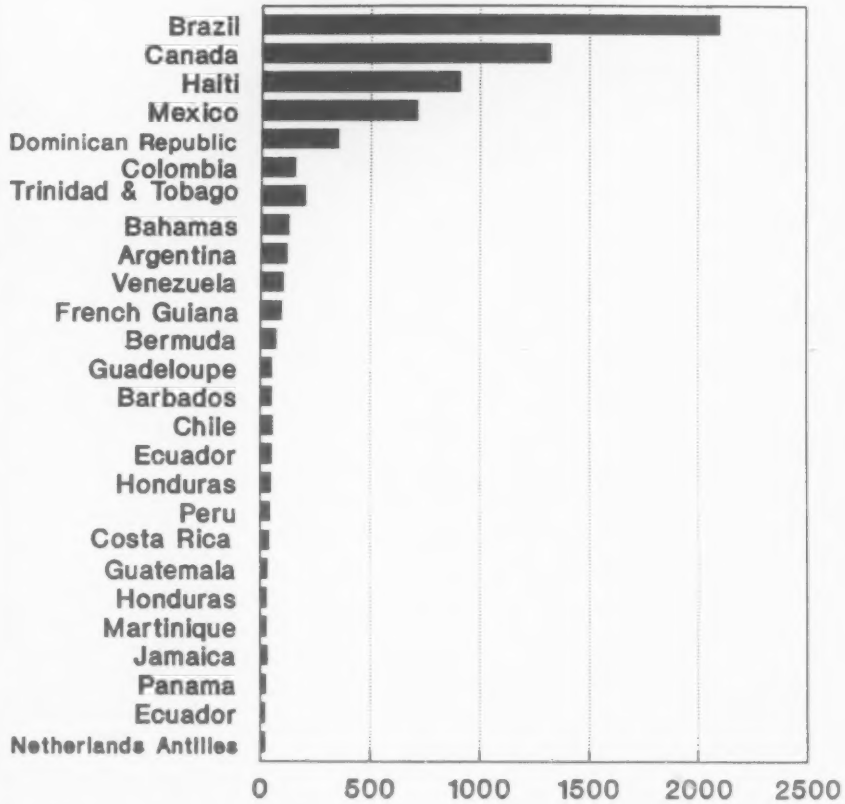


AIDS IN THE AMERICAS

Reported cases by 6-month periods
USA, Brazil and Mexico, 1979-1987



AIDS IN THE AMERICAS **Reported Cases By Country *** **Notified By 30 November 1987**



* Excluding the USA & countries reporting less than 10 cases.

Number of cases

AIDS IN THE AMERICAS
Cases Reported Per 1,000,000 Population
By Subregion
1986

Subregion Country	Cases	Cases Per 1,000,000 (a)
REGIONAL TOTAL	15478	22.7
LATIN AMERICA (b)	1169	2.9
ANDEAN GROUP	94	1.1
SOUTHERN CONE	49	1.0
BRAZIL	381	2.8
CENTRAL AMERICAN ISTHMUS	60	2.2
MEXICO	250	3.1
LATIN CARIBBEAN (c)	335	12.5
CARIBBEAN	276	38.6
NORTH AMERICA (c)	14033	52.6

(a) 1986 mid-year population estimates. Ratios not computed for fewer than 10 cases.

(b) French Guiana, Guyana and Suriname included in Caribbean.

(c) Data for Puerto Rico included in USA.

AIDS IN THE AMERICAS

Cases Reported Per Million Population

1986

Country	Cases	Cases Per Million (a)
Bermuda	21	259.3
Bahamas	50	213.7
Barbados	20	78.7
USA (b)	13,599	56.4
Trinidad & Tobago	63	52.3
Haiti	242	35.8
Canada	413	16.1
Dominican Republic	90	14.1
Jamaica	16	6.7
Panama	15	6.7
Costa Rica	11	4.1
Mexico	250	3.1
Brazil	381	2.8
Honduras	10	2.2
Venezuela	37	2.1
Chile	12	1.0
Argentina	27	0.9

(a) Ratios not computed for fewer than 10 cases.

(b) Data for Puerto Rico included in USA.

AIDS IN THE AMERICAS

Reported cases by sex and male/female ratio, selected countries
Data through 30 June 1987

Country	Number of Cases	Percent			Ratio M/F
		M	F	UNK	
Argentina	95	100	0	0	All Male
Canada	1124	94	6	0	15.5
Chile	42	96	4	0	27.0
Costa Rica	31	35	0	65	All Male
Cuba	3	100	0	0	All Male
Ecuador	18	61	0	39	All Male
Mexico	534	96	4	0	21.3
Panama	19	26	0	74	All Male
USA	38312	93	7	0	12.6
Caribbean Islands (a)	383	24	6	70	4.2
French Caribbean (b)	146	66	34	0	1.9
Guatemala	27	22	4	74	6.0
Haiti	851	20	9	71	2.3
Honduras	29	38	17	45	2.2

(a) Includes only countries with data by sex: Bahamas, Bermuda, Cayman Islands, Grenada, Suriname, Trinidad & Tobago and Turks & Caicos.

(b) Includes French Guiana, Guadeloupe and Martinique.

AIDS IN THE AMERICAS

Distribution of cases and population
In Latin America and the Caribbean, by subregion

Data through 30 June 1987

Subregion	AIDS Cases		Population Percent (a)
	Number	Percent	
LATIN AMERICA AND CARIBBEAN	4258	100	100
LATIN AMERICA (b)	3722	87	98
ANDEAN GROUP	154	4	20
SOUTHERN CONE	164	4	12
BRAZIL	1696	40	33
CENTRAL AMERICAN ISTHMUS	120	3	6
MEXICO	534	12	20
LATIN CARIBBEAN (c)	1054	24	7
CARIBBEAN (b,c)	536	13	2

(a) Based on 1986 mid-year population estimates.

(b) Caribbean Region includes French Guiana, Guyana,
and Suriname.

(c) Data for Puerto Rico not included.

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SPECIAL
PROGRAMME
ON AIDS

PROGRESS REPORT
NUMBER 1

APRIL 1987



WORLD
HEALTH
ORGANIZATION

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Foreword

In the past year, we have witnessed an extraordinary change in public attitude towards AIDS. Similarly, the WHO perspective on AIDS has evolved dramatically.

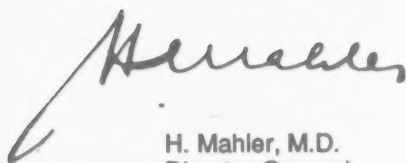
In May 1986, the World Health Assembly supported an intensification of the AIDS programme within WHO. In late June 1986, the Second Meeting of Participating Parties provided moral and financial support for this new WHO programme. In November 1986, WHO's commitment to global AIDS prevention and control was broadened and clarified.

Immediate action was taken within WHO to reinforce the capability of the AIDS programme. Personnel were seconded from other WHO activities. An intensive reformulation of Programme goals, objectives and needs was undertaken. Programme activity and visibility increased rapidly and on 1 February 1987 the Special Programme on AIDS was established.

This Third Meeting of Participating and Interested Parties provides an opportunity to review the accomplishments of the AIDS Programme during the past ten months, and to discuss future directions for worldwide AIDS prevention and control.

The global strategy for AIDS control is to stop the spread of AIDS worldwide by attacking every mode of transmission, in every country, using every scientific and educational tool available. This daunting task will require an unprecedented level of external support for WHO.

We look forward to this Third Meeting of Participating and Interested Parties, to two days of discussion about the accomplishments, goals, objectives and challenges of the Special Programme on AIDS, and to your continued and vital support for global AIDS prevention and control.



H. Mahler, M.D.
Director-General

Introduction

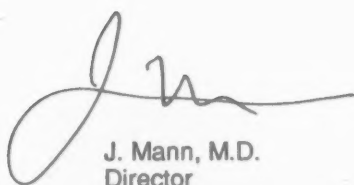
This report covers an extremely important ten-month period in our confrontation with the human immunodeficiency virus (HIV). During this time, many countries throughout the world have realized that AIDS threatens entire societies, rather than segments of society. This recognition has led to national public education programmes of unprecedented scope and cost, containing messages of unique frankness and clarity.

In addition, many peoples are becoming increasingly aware of the global dimensions of AIDS. Media interest is extremely high regarding AIDS in North, South and Central America, the Caribbean, Asia, Africa, Europe, Australia and the Pacific. The global public is being regularly informed that no country or region of the world can be considered safe or free from HIV infection.

HIV infection has extraordinary and broad effects throughout society. The economic impact results not only from the expense of medical care for AIDS patients (which threatens national health budgets in developed and developing countries) but also from enormous indirect costs: lost years of productive life; lost mothers and fathers; lost members of educated and other groups who contribute importantly to social and economic development. The psychosocial impacts of AIDS extend from personal and family tragedies resulting from HIV infection (often amplified by fear and ignorance) to the stigmatization of groups and entire peoples.

AIDS has altered the social and political, as well as the public health environment. Accordingly, the world of 1987 is very different from that of 1980, when the AIDS virus, spreading silently throughout the world, had yet to be recognized.

The World Health Organization is fully committed to AIDS prevention and control. On 1 February 1987, the Special Programme on AIDS was established to implement a worldwide prevention and control strategy. This progress report describes many of the WHO activities against AIDS undertaken from June 1986 to April 1987. The achievements of this period are a credit to many; the challenges ahead will demand the best of us all.



J. Mann, M.D.
Director
Special Programme on AIDS

Highlights

- **Special Programme on AIDS established 1 February 1987**
- **Extra-budgetary resources (US \$6.5 million) received as of 31 March 1987**
- **Global strategy developed; initial assessment and national plan guidelines drafted**
- **Critical number of staff for Special Programme nearly reached**
 - temporary staff seconded to SPA from other WHO programmes
 - professional and support positions established in SPA
 - secondments to SPA under way from three Member States
 - regional office and country-level positions being established
- **National programme support**
 - US \$5.6 million to support and strengthen national AIDS programmes
 - over 75 consultant visits (epidemiology, laboratory, education/information, planning)
 - initial visits to 19 countries
 - initial visits planned to 20 countries
 - initial epidemiological assessment in 17 countries
 - immediate support for urgent actions recommended in 20 countries
 - collaboration with 17 AIDS committees to develop national plan
 - ten laboratory workshops held in 1986
- **Global activity**
 - 104 countries now reporting cases of AIDS to WHO
 - extensive collaboration established with WHO programmes, UN agencies and non-governmental organizations
 - large-scale information activities include press kits, over 10 press conferences to a global audience and over 100 media interviews
 - seven major meetings held on global research and policy issues; six additional meetings planned from mid-April through July 1987
 - broad international support for WHO leadership of global AIDS control strategy

The Global Strategy

AIDS will be controlled through the combination of aggressive national programmes and extraordinary international cooperation. AIDS will be controlled by attacking every mode of AIDS virus spread, in every country, using every scientific and educational tool.

- Implementation of national AIDS programmes is of the highest priority, for each national programme not only attacks AIDS in that country, but contributes to global control.
- Assurance of global collaboration is of the highest priority, for AIDS cannot be stopped in any country until it is stopped in all countries.

Part I

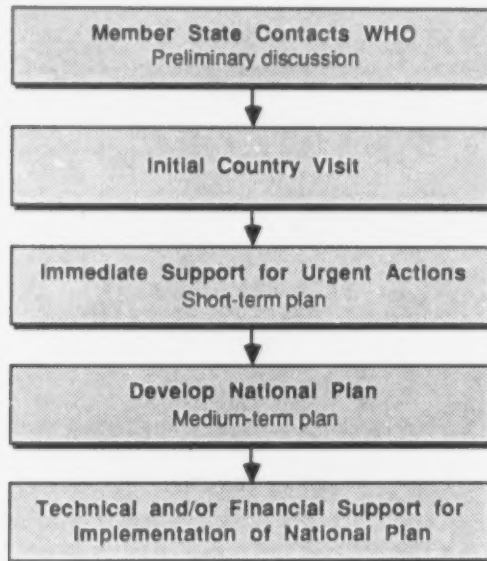
Support to National AIDS Programmes

Every country in the world needs a National AIDS Prevention and Control Programme.

The Special Programme on AIDS (SPA), in close association with regional offices, has thus far provided over 75 consultant visits and US \$5.6 million to support and strengthen national AIDS programmes.

Collaboration with a Member State begins promptly after preliminary discussions between the Ministry of Health, the Regional Office and SPA. The initial phases of SPA/WHO support follow a logical, yet pragmatic and flexible sequence:

WHO action course



Up to 15 April 1987, SPA/WHO made initial visits to 19 countries: Argentina, Brazil, Cameroon, Central African Republic, Congo, Ethiopia, Haiti, Kenya, Kuwait, Liberia, Mauritius, Mexico, Mozambique, Nigeria, Uganda, United Republic of Tanzania, Zaire, Zambia and 19 Caribbean countries through the Caribbean Epidemiology Centre (CAREC - counted as one). As of 15 April, visits are planned to 20 additional countries: Benin, Burundi, Cape Verde, Côte d'Ivoire, Dominican Republic, Egypt, Gabon, Ghana, Guinea, Guinea-Bissau, Jordan, Mali, Niger, Rwanda, Senegal, Sudan, Swaziland, Syrian Arab Republic, Togo and Venezuela.

SPA/WHO consultant teams have included specialists in epidemiology, laboratory diagnosis, health planning and public health communication/education.

SPA/WHO is collaborating with 18 Member States to develop national plans.

The current progress of collaboration between SPA/WHO and Member States is outlined in Table 1; specific illustrative examples are given in this report.

SPA/WHO proposes to visit and support 50 Member States during 1987.

Table 1 SPA/WHO collaboration with Member States to support national AIDS programmes (as of 15 April 1987)

■ Completed

□ Under way or planned

Country	Initial visit	Immediate support	Short-term plan	Medium-term plan
Argentina	■	□		
Benin	□			
Brazil	■	■	■	□
Burundi	□			
Cameroon	■	□	■	□
Cape Verde	□			
Caribbean Islands (through CAREC*)	■	■	■	
Central African Republic	■	□	□	
Congo	■	□	■	□
Côte d'Ivoire	□			
Dominican Republic	□			
Egypt	□			
Ethiopia	■	■	■	□
Gabon	□			
Ghana	□			
Guinea	□	□		
Guinea-Bissau	□	■		
Haiti	■	■	■	
Jordan	□			
Kenya	■	■	■	■
Kuwait	■			
Liberia	■	□	■	□
Mali	□			
Mauritius	■	□	■	□
Mexico	■	■	■	
Mozambique	■	□	■	□
Niger	□			
Nigeria	■	□	■	□
Rwanda	□			
Senegal	□			
Sudan	□			
Swaziland	□			
Syrian Arab Republic	□			
Togo	□			
Uganda	■	■	■	■
United Republic of Tanzania				
Mainland	■	□	■	■
Zanzibar	□			
Venezuela	□			
Zaire	■	□	■	□
Zambia	■	■	■	■

* Caribbean Epidemiology Centre (Anguilla, Antigua and Barbuda, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands)

The initial country visit

The initial country visit helps strengthen the political commitment to support an active National AIDS Prevention and Control Programme. SPA/WHO staff meet with senior government officials and review the global, regional and national AIDS situation, national and bilateral actions to date, the principal components of a national plan and WHO strategies and resources. The visiting team emphasizes the importance of establishing a broadly representative national AIDS committee, for this Committee becomes the mechanism for developing the national plan.

During the initial visit, an assessment of the AIDS situation is conducted or planned as a subsequent activity. Existing components of the national strategy are reviewed and areas requiring prompt action (e.g., implementation of initial educational programmes for high-risk groups, health care workers or the general public) are identified and immediate WHO support is arranged. Finally, the SPA/WHO staff and Ministry of Health officials prepare a timetable for subsequent stages of WHO/Member State collaboration.

Argentina

Immediately following SPA/WHO's initial visit to Argentina on 5-6 February 1987, the Ministry of Health mobilized all relevant resources to prepare a National AIDS Prevention and Control Programme.

The SPA/WHO team included the Regional Office staff responsible for AIDS and the Director of SPA. The SPA/WHO team reviewed the information available on AIDS cases in Argentina with over 20 health workers responsible for key elements of the health care system. Although only a relatively small number of AIDS cases had been reported (69), the medical community had completed careful study of the clinical and epidemiological profile of AIDS in Argentina.

An evening seminar/discussion was arranged for senior representatives from several government ministries. The global scope of AIDS, the "iceberg effect" (relatively few AIDS cases compared with much larger numbers of HIV-infected persons), and the inevitable sharp increase in AIDS cases to be expected in Argentina during the next 5 years commanded attention.

The following morning, at a meeting with the Secretary of Health, SPA/WHO staff outlined the severity and scope of the AIDS pandemic, described national strategies and the WHO global AIDS programme. A meeting was arranged immediately thereafter with representatives from the Ministry of Health, National Academy of Medicine, National Research Council, specialized institutions, clinical care programmes and universities. A lengthy discussion focused on the components of a National AIDS Prevention and Control Programme and resulted in the Ministry of Health requesting those present to assess how each institution could contribute to a national programme. These responses were incorporated into a draft national plan which was submitted to WHO within two weeks; a final plan was received four weeks later.

Liberia

Concern about global and regional HIV epidemiology prompted the Ministry of Health and Social Welfare of the Republic of Liberia to request an initial visit by SPA/WHO. One case of AIDS had been diagnosed in 1986. However, serosurveys showed no evidence of HIV infection in two population samples. On 3 February 1987, a SPA/WHO team held discussions with the Ministry about the steps required to strengthen surveillance of HIV-infection and activities to improve national preparedness for dealing with further cases of AIDS and HIV infection.

A "core group meeting" on AIDS was held with representatives from the Ministry of Health and Social Welfare, medical specialty groups, maternity care, social work and education units, the Medical Students' Association, blood bank staff and the Liberian Red Cross. The meeting produced a draft proposal for terms of reference and membership of a National Advisory Committee on AIDS (NACA).

The Ministry of Health and Social Welfare decided to establish the NACA formally within three months. The NACA's broad terms of reference include advising the Ministry on scientific, technical and operational matters pertaining to the planning, implementation, monitoring and evaluation of the prevention and control of AIDS in Liberia, and to advise on related research and development activities.

Further discussion between SPA/WHO and the Ministry identified a series of short-term actions to strengthen the surveillance of HIV-infection:

- Laboratories will be strengthened to increase HIV diagnostic capability
- Clinical criteria for AIDS diagnosis are being reviewed for distribution throughout the health system
- Clinical experience in the diagnosis and management of AIDS patients has been arranged for two Liberian physicians.

WHO and the Ministry agreed to collaborate in the establishment of a National Programme for Liberia on the Prevention and Control of AIDS. The Programme will form an integral part of Ministry of Health activities and develop links with other Ministries. The Programme's focus will be to provide AIDS education and information through primary health care systems and community involvement.

The initial epidemiological assessment

SPA/WHO has carried out initial epidemiological assessments in 17 Member States. An initial assessment of the current AIDS and HIV epidemiological situation is essential for planning a national AIDS Prevention and Control Programme. The initial assessment is intended to:

- obtain information regarding the occurrence of clinical AIDS;
- obtain information regarding HIV seroprevalence;
- provide a reasoned assessment of the general dimensions of the AIDS/HIV epidemiological situation to the national AIDS committee.

SPA/WHO initial epidemiological assessments include an analysis of existing serological studies and the available data on AIDS cases. If the AIDS and HIV situation is unclear, SPA/WHO may perform 'on the spot' seroprevalence surveys and plan more extensive studies.

Haiti

AIDS and HIV infection are significant public health problems in Haiti. From 26-29 January 1987, a three-member SPA/WHO team visited Haiti to collaborate with the Ministry of Public Health and Population in developing a national AIDS prevention and control programme. A review of existing serosurvey data and information on AIDS cases was considered sufficient for an initial assessment of the epidemiological situation.

Although 785 AIDS cases had been officially recorded in Haiti, the National Technical Committee on AIDS estimated that at least 1 000 cases had occurred. The average monthly number of new AIDS cases seen by members of the Haitian Group for the Study of Kaposi's Sarcoma and Opportunistic Infections (GHESKIO) increased from one in 1981 to 13.5 in early 1986 to 20-25 in January 1987. Seventy percent of cases were in men. However, only 10% of these men were classified as homosexual or bisexual; 1% were IV drug abusers; 8% were recipients of blood transfusions, and the large majority (81%) were considered to have become infected through heterosexual contact. Among women with AIDS, 24% were infected through blood transfusions and 76% through heterosexual contact. Eighty percent of all AIDS patients live in the capital, Port-au-Prince; 10% live in rural areas, and 10% come from abroad.

A number of HIV antibody studies suggest the extent of HIV infection in Haiti.

(Cont.)

Haiti (Cont.)

Available studies demonstrated HIV seropositivity among:

- 3% of pregnant women at the Albert Schweitzer Hospital;
- 38% to 49% of female prostitutes;
- 22% of 166 patients with tuberculosis;
- 55% of 174 regular sex partners of AIDS patients;
- 2% to 4% of blood donors screened at the Red Cross Blood Transfusion Center in Port-au-Prince;
- 6% of 109 hotel and factory workers.

Sexual transmission of HIV appears to be the most common route of infection; most sexual spread is apparently heterosexual. HIV transmission through blood and blood products is also important along with practices involving needles, syringes and other instruments. For example, health authorities estimated that there were between 10,000 and 15,000 "piqueuristes" (injectionists) who administer injections on demand without medical supervision, adequate training or appropriately sterilized equipment.

The extent of AIDS and HIV transmission in Haiti as determined in this assessment led SPA/WHO to provide immediate support and increase the priority for technical and financial support to Haiti.

Mozambique

In the People's Republic of Mozambique, SPA/WHO is supporting a national seroepidemiological survey of HIV infection. This follows an SPA/WHO team visit to Maputo on 2-9 March 1987, which was unable to identify and collect sufficient information on the prevalence of AIDS and HIV infection for the planning of a National AIDS Prevention and Control Programme.

Although no clinical AIDS cases had been seen by the staff at Maputo Central Hospital, three deaths were diagnosed retrospectively as AIDS on clinical grounds. The SPA/WHO team performed three 'on the spot' surveys (sample sizes ranged from 50 to 130) for antibodies to HIV. Sera were obtained from blood donors, patients at sexually transmitted disease clinics and tuberculosis patients. Sera testing positive by ELISA technique in Maputo were forwarded to the Institut Pasteur in Bangui, Central African Republic (a WHO Collaborating Centre on AIDS) for Western Blot confirmation.

During the National Seroepidemiological Survey sera will be tested from 3800 men and women (over 15 years old) living in the main cities. In addition, patients with Kaposi's sarcoma will be sought and tested for serological evidence of HIV infection. A sample survey of high-risk groups will also be performed. Individuals found to be HIV-antibody positive will be informed and counselled.

(Cont.)

Mozambique (Cont.)

The Immunology Laboratory at the National Institute of Health in Maputo is being strengthened and supported to perform ELISA, Western Blot examinations and T-lymphocyte subset determination. SPA/WHO will supply the necessary reagents, supplies and equipment; an experienced immunologist may be appointed to the laboratory as a WHO Consultant.

The national seroepidemiological survey will provide the Ministry of Health with the essential information for establishing priorities for screening at blood banks, creating a national epidemiological surveillance system and defining appropriate targets for a national health education programme.

Immediate support for urgent actions

At the onset, AIDS prevention and control often requires immediate action.

During or following the initial visit, SPA/WHO and the Ministry of Health jointly decide which measures, if any, should be implemented prior to, or simultaneously with the development of a medium-term national plan.

SPA/WHO has recommended immediate support to 20 Member States: Argentina, Brazil, Cameroon, Central African Republic, Congo, Ethiopia, Guinea, Guinea-Bissau, Haiti, Kenya, Liberia, Mauritius, Mexico, Mozambique, Nigeria, Uganda, United Republic of Tanzania, Zaire, Zambia and Caribbean countries through CAREC.

Examples of immediate support are provided below (US\$):

Kenya \$387 000

- Establish blood screening systems in seven provincial and one central hospital
- Support national production of guidelines for health workers on AIDS prevention and control
- Support national production of educational material for the public

Uganda \$310 000

- Establish blood donor screening in major city and provincial hospitals
- Establish effective national surveillance system for AIDS

Zambia \$495 800

- Initiate and establish nationwide blood donor screening for HIV

Zambia

A project to implement nationwide screening of the blood supply for HIV has been launched in Zambia. The project is fully supported by SPA/WHO at the request of the Ministry of Health, following joint assessment of the HIV situation among blood donors and development of a project proposal.

In Zambia, the screening of blood donors for antibody to HIV was limited to the University Teaching Hospital in Lusaka. One other laboratory, at the Tropical Disease Research Centre in Ndola, offered HIV antibody testing. In early November 1986, SPA/WHO and the Zambian Ministry of Health agreed that HIV infection arising from the necessary use of blood must be halted as soon as possible. A follow-up visit by an SPA/WHO consultant later in November led to development of a national blood donor screening proposal which was submitted to SPA/WHO in mid-December 1986.

- Existing facilities could undertake only limited additional work and therefore testing will be decentralized to districts and provinces.
- Essential equipment, supplies, training and support for staff costs is being provided for more than 30 blood-screening centres.
- Activities are being coordinated by the National Blood Transfusion Centre at the University of Lusaka.
- Six vehicles are being provided to ensure the reliable transportation of reagents and serum specimens from hospitals and health care centres to blood screening centres and to the regional reference laboratories at Lusaka and Ndola. Efficient transportation is vital to support the widely dispersed centres and to facilitate the collection of accurate information.
- For a minimum of three months all samples tested seropositive at the blood screening centres will be sent to the designated regional reference laboratory. Repeat testing and confirmation will be undertaken by the reference laboratory and results will be sent back to the blood-screening centres on a monthly basis. Donors will only be informed of a positive result if confirmed by repeat testing.
- The counselling of donors found to be HIV-antibody positive is an integral part of the project.

Monitoring the implementation of this project is vital to ensure its success. The data and experience derived will benefit longer-term support for protection of the blood supply in Zambia, as well as the development of similar programmes in neighbouring countries. The project is expected to be operating nationwide in May 1987.

Nigeria

Nigeria established a National Expert Committee on AIDS in June 1986. At the request of the Ministry of Health an SPA/WHO team visited Nigeria from 9-13 March 1987 to review the Committee's current and planned activities and to plan further collaboration.

Prior to the initial visit, neither cases of AIDS nor of HIV seropositivity had been identified; accordingly, the National Expert Committee had stated that HIV was not yet in Nigeria. However, just after the mission, two of 2 000 blood samples tested were positive for antibodies to HIV (both samples were from female prostitutes). The Minister of Health promptly conveyed this information in a press conference during which he recognized WHO collaboration and announced a public education programme on AIDS.

- Technical and financial resources are being mobilized immediately while a medium-term national AIDS plan is being prepared.
- There is an immediate need for educational materials with messages adapted to different socioeconomic groups and geographical areas.
- To define the educational objectives and target groups, the National Committee is organizing a national health education workshop; SPA/WHO will provide a consultant on health communication/education.

The establishment of HIV diagnostic capabilities is also a priority.

- SPA/WHO is providing the resources to equip eight diagnostic and two reference laboratories to perform ELISA tests.
- Reagents (ELISA kits) will be supplied to enable each laboratory to perform 7 500 tests per year.
- WHO will provide funds and a consultant for a workshop to train the technologists and scientists (two from each laboratory) in the ELISA technique.

Developing the national plan

A comprehensive national plan for AIDS prevention and control is an indispensable tool. The national plan not only guides national resource allocation but also provides the basis for coordinated bilateral and multilateral support to the national programme.

The short-term (6-12 months) action plan is the basis for the development of comprehensive medium-term (3-5 year) strategies and activities. Both short and medium-term plans reflect a mixture of practical experience, knowledge about

AIDS and general planning concepts. In addition, the national plan includes the principal components as previously described.^{1,2}

- National AIDS Committee
- Initial epidemiological and resource assessment
- Epidemiological surveillance
- Laboratory capability
- Clinical services and education of health workers
- Prevention programmes
- Programmes to reduce impact of HIV infection.

SPA/WHO is collaborating with 17 National AIDS Committees to develop national plans: Brazil, Cameroon, the Caribbean (through CAREC), Central Africa: Republic, Congo, Ethiopia, Haiti, Kenya, Liberia, Mauritius, Mexico, Mozambique, Nigeria, Uganda, the United Republic of Tanzania, Zaire and Zambia.

Five-year plans have been completed for Kenya, Uganda, the United Republic of Tanzania and Zambia. According to national capability and external resource availability, national programmes will be supported and implemented.

Uganda

The Government of Uganda has given the highest priority to controlling the AIDS epidemic. In October 1986, the Ministry of Health established the National Committee for the Prevention of AIDS. An initial visit by a team of SPA/WHO consultants on 14-16 January 1987 resulted in a short-term plan and immediate assistance. During the second half of February, three SPA/WHO consultants collaborated with the Ministry of Health in drafting a detailed medium-term plan.

Uganda is one of the first countries to develop a comprehensive five-year plan for national AIDS prevention and control. The plan defines the Programme's responsibilities, structure, staffing and required resources for 1987-1991. An SPA/WHO consultant has been assigned to Uganda starting in late March to assist the Ministry of Health in coordinating national activities, including external assistance, required to implement the plan.

The overall aim of the AIDS control programme is to reduce the incidence of HIV infection and its associated morbidity in Uganda. Nine objectives have been formulated:

- Assess the current status of the epidemic
- Monitor the progression of the epidemic through surveillance
- Prevent HIV infection by decreasing sexual transmission

(Cont.)

¹ Document WHO/CPA/86.2

² Document WHO/SPA/GEN 87.1

Uganda (Cont.)

- Prevent HIV infection by decreasing transmission through blood transfusion
- Prevent HIV infection by decreasing transmission through other contact with blood and blood products (e.g., injections)
- Prevent HIV infection by decreasing mother-to-child transmission
- Improve clinical management of AIDS patients
- Improve diagnostic capabilities for HIV infection
- Develop and coordinate research activity.

Wherever appropriate, the activities proposed to implement these strategies will be integrated into the existing health infrastructure. The AIDS Programme will be directly supervised by the office of the Minister of Health. The National AIDS Committee will advise the Programme and be responsible for AIDS policy formulation. The Programme will be evaluated regularly with collaboration from SPA/WHO.

Technical and/or financial support for implementation

In addition to the country-specific support described in the previous sections, SPA/WHO has conducted training workshops on laboratory techniques for HIV antibody screening (see Table 2). Ten workshops were held during 1986, during which laboratory personnel from 17 African, 11 American, 5 South-East Asian, over 20 European and 22 Eastern Mediterranean countries received training. More than 10 workshops will be held in 1987. Workshop objectives include:

- Strengthening the capability of the health infrastructure;
- Supporting the establishment of surveillance and prevention/control activities;
- Providing support for seroepidemiological research to determine risk factors, mode of transmission, natural history, etc;
- Enhancing collaboration with WHO Collaborating Centres on AIDS;
- Transferring appropriate technology.

Table 2 SPA/WHO Laboratory Workshops on HIV Antibody Screening, 1986-87

Region	Date	Location	Countries Represented	Number of Participants
Africa				
	17-22 Nov 1986	Kigali, Rwanda	Burundi, Cameroon, Central African Republic, Congo, Gabon, Rwanda, Zaire	16
	8-13 Dec 1986	Dar-es-Salaam, Tanzania	Ethiopia, Kenya, Tanzania, Uganda, Zambia, Zimbabwe	15
	2-7 Feb 1987	Accra, Ghana	Ghana, Liberia, Nigeria, Sierra Leone	13
	4-9 May 1987	Nairobi, Kenya	Angola, Botswana, Ethiopia, Gambia, Kenya, Mozambique, Swaziland	16
	22-27 June 1987	Lagos, Nigeria		16
	2-7 Nov 1987	Abidjan, Côte d'Ivoire	Benin, Burkina Faso, Côte d'Ivoire, Chad, Togo	12
	9-14 Nov 1987	Dakar, Senegal	Algeria, Mali, Mauritania, Niger, Senegal	12
Americas				
	3-7 Nov 1986	Rio de Janeiro, Brazil	Brazil, Cuba, Colombia, Honduras, Mexico, Panama, Paraguay, Peru, Venezuela	15
South-East Asia				
	16-20 June 1986	New Delhi, India	India	20
	15-20 Dec 1986	Bangkok, Thailand	India, Indonesia, Maldives, Nepal, Thailand	8
	Nov 1987	Under discussion		

(Cont.)

Table 2 (Cont.)

Region	Date	Location	Countries Represented	Number of Participants
Europe				
	23-25 June 1986	Paris, France	Algeria, Argentina, Brazil, Cameroon, France, Ghana, Guadeloupe, Nigeria, Rwanda, Zaire	20
	28-30 June 1986	Berlin (West)	Belgium, Czechoslovakia, Ethiopia, Ghana, Italy, Morocco, Nigeria, Norway, Portugal, Switzerland, Yugoslavia	20
	September 1987	Athens, Greece	20	20
	October 1987	Berlin (West)	20	20
	November 1987	Madrid, Spain	20	20
	December 1987	Paris, France	20	20
Eastern Mediterranean				
	13-17 April 1986	Cairo, Egypt	Iraq, Jordan, Kuwait, Pakistan, Somalia, Sudan, Yemen	15
	13-18 July 1986	Islamabad, Pakistan	Afghanistan, Democratic Yemen, Djibouti, Iran, Libya, Pakistan, Syria, Tunisia	20
	22-28 Nov 1986	Kuwait	Bahrain, Cyprus, Lebanon, Oman, Qatar, Saudi Arabia, United Arab Emirates	15
	June 1987	Cairo, Egypt	Cyprus, Egypt, Iraq, Jordan, Somalia, Yemen	15
	June 1987	Islamabad, Pakistan	Democratic Yemen, Iran, Libya, Pakistan, Syria	15
	June 1987	Kuwait	Afghanistan, Bahrain, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, United Arab Emirates	15

Part II

Global Leadership and International Activities

The WHO Special Programme on AIDS is providing strong leadership to ensure international coordination and collaboration for the global AIDS strategy.

The global problem

"We stand nakedly in front of a pandemic as mortal as any pandemic there has ever been." Dr Halfdan Mahler gave this stark assessment in a worldwide press briefing held at the United Nations Headquarters in New York on 20 November 1986. Characterizing AIDS as an unprecedented challenge, Dr Mahler outlined the WHO commitment to global AIDS prevention and control.

"In the same spirit that WHO addressed smallpox eradication, WHO will dedicate its energy, commitment and creativity to the even more urgent, difficult and complex task of global AIDS prevention and control. AIDS is a global health problem of paramount international importance. The actions we take now may have a more profound impact on the history of the AIDS epidemic than actions taken at any later time. We are present at the historic moment, the beginning of a major worldwide epidemic of an infectious disease first recognized only five years ago.

WHO is ideally suited to provide an effective international platform for coordinating and directing the overall efforts for AIDS in such fields as prevention, control, research and policy making.

However, WHO is not a supranational organization and national Governments must have the necessary commitment if global AIDS prevention and control is to be achieved."

Office of the Director

At the invitation of Member States and as speaker at major conferences, the SPA Director has visited each Region as spokesman for the global AIDS control strategy. Visits to Member States have included discussions of strategy and mobilization of resources for the global programme.

Since July 1986, the Director has visited 21 countries in six regions: Argentina, Australia, Belgium, Brazil, Canada, the Congo, Denmark, France, Federal Republic of Germany, India, Italy, Kenya, Kuwait, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Zaire and Zambia. During those visits, meetings were held with national AIDS committees, senior government officials from ministries of health, social welfare, education and foreign assistance, members of the medical and scientific community, donor agencies and private corporations.

Through presentations and interviews, the Director contributes to accurate public information on AIDS. Media interest in the SPA/WHO Programme is high and country visits include interviews with newspaper, radio and television journalists. Since November 1986, the Director has made more than twenty formal presentations on the global AIDS situation and the WHO global strategy. These include giving evidence to the Select Committee on Social Services of the British House of Commons and to the United States Senate Committee on Labour and Human Resources (Chairman: Senator Kennedy). In response to media requests, the Division of Information and Health Education has arranged over 100 individual interviews with the SPA Director. These interviews are additional to the many given during visits to Member States.

SPA Staffing: Provisional and Permanent

In order to support the expanding SPA mandate, professional and support staff from within WHO were seconded to SPA for varying periods. Table 3 demonstrates that, with considerable support from other WHO programmes, SPA received a temporary staff. The willingness and dedication of this temporary staff has been critical to the new programme's functioning.

Table 3 SPA staff (full and part-time) including secondments, temporary appointments, and short-term consultants

Date	Professional	General support	Total
1 November 1986	1	1	2
1 December 1986	6	2	8
1 January 1987	5	3	8
1 February 1987	13	8	21
1 March 1987	18	11	29

By early April, the first 19 (nine professional and ten general support) SPA positions were established. The critical mass of SPA personnel has nearly been achieved.

Collaboration

The global AIDS strategy requires close collaboration with many health programmes.

WHO Headquarters

Examples of collaborative work within WHO Headquarters include:

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|------------|--|
| EPI | Expanded Programme on Immunization <ul style="list-style-type: none"> • Joint preparation of WHO/UNICEF statement on immunization and HIV infection • Discussions on research agenda regarding HIV and immunization |
| TDR | Research and Training in Tropical Diseases <ul style="list-style-type: none"> • Joint planning for international conference on HIV infection and tropical diseases |
| ORH | Oral Health <ul style="list-style-type: none"> • Joint planning and support for training materials and seminars for dentists |
| NUR | Nursing <ul style="list-style-type: none"> • Collaboration with International Council of Nurses on joint declaration and preparation of guidelines for nurses |
| HRP | Research Development and Research Training in Human Reproduction <ul style="list-style-type: none"> • Preparation of joint consultation on contraception and HIV |
| FHE | Family Health <ul style="list-style-type: none"> • Preparation of joint consultation on HIV-related maternal and child health research |
| IEH | Public Information and Education for Health <ul style="list-style-type: none"> • Media kit; press conferences |
| CDS | Communicable Diseases <ul style="list-style-type: none"> • Joint sponsorship of Immunology of AIDS meeting • Review of guidelines for leprosy workers |
| CDD | Diarrhoeal Diseases Control <ul style="list-style-type: none"> • Request for consideration of HIV-associated diarrhoeal diseases in CDD evaluations |
| BLG | Biologicals <ul style="list-style-type: none"> • Discussions regarding blood donor screening programmes |
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|------------|--|
| DAP | Action Programme for Essential Drugs <ul style="list-style-type: none">• Preliminary discussions regarding anti-HIV drugs |
| JMS | Joint Medical Services <ul style="list-style-type: none">• Adviser for policy on HIV screening of WHO staff |
| HLE | Health Legislation <ul style="list-style-type: none">• Information regarding legislation and policies introduced by Member States to control spread of HIV is being collected and disseminated upon request. A more formal survey of national legislation in this area has been commissioned. |

WHO Regional Offices

SPA has established close working relationships with the Regional Offices. Detailed discussions have been held with Regional Directors in January 1987 and with regional communicable disease advisers in February 1987 on strengthening regional office capabilities regarding AIDS and contributing support for regional workshops and other regional and interregional activities.

Regional Consultations

In addition to the laboratory workshops supported by SPA, the following inter-country consultations and meetings have been organized by WHO in the regions:

Africa

A regional conference on AIDS in Africa was held in Brazzaville, Congo from 11-13 November 1986. The objectives included: a scientific review and update of the global aspects of the biology, immunopathogenesis, clinical features, laboratory aspects and epidemiology of HIV infection and AIDS; a scientific review and update of the clinical, laboratory and epidemiological features of HIV and related retroviruses in Africa; and a review of the practical experiences and activities to date in Africa. Representatives from 37 Member States of the African Region attended the conference and approved recommendations for both Member States and WHO, encouraging the latter to continue to take a strong position of leadership and advocacy for national and international programmes on the prevention and control of AIDS.

Americas

A regional conference on AIDS is planned for Quito, Ecuador from 14-15 September 1987.

South-East Asia

An intercountry consultation on the prevention and control of AIDS was held at the WHO Regional Office for South-East Asia, New Delhi from 13-16 July 1986. Twelve participants from eight countries reviewed the AIDS situation in the Region and discussed future collaboration with WHO.

Europe

A regional meeting on AIDS diagnosis and control (Munich, 16-18 March 1987) was attended by 45 participants from 26 countries. The meeting explored intersectoral public health approaches to control the spread of HIV infection. A review and update on AIDS and HIV infection included: epidemiology, pathogenesis, laboratory diagnosis, therapy, immunoprophylaxis, legal and ethical issues, social economic and psychological aspects, paediatrics, drug abuse, survey results, transmission models and quality control of biologicals.

Eastern Mediterranean

In addition to the regional meeting held in February 1986, a meeting of representatives of Gulf States was held in Kuwait from 7-8 March 1987.

Western Pacific

A regional conference on AIDS prevention and control strategies will be held in Australia from 20-24 July 1987.

The United Nations family

SPA is actively collaborating with UNICEF, UNESCO and the World Bank and initial discussions have been held with UNDP, UNFPA and UNHCR. For example, SPA is collaborating with UNESCO in the development of effective educational materials for national education authorities. A joint meeting with educational specialists is planned for June/July to explore approaches and formulate a plan of action. SPA has worked closely with UNICEF in addressing specific concerns such as immunization and in order to ensure complete consistency in technical, informational and policy areas.

Other organizations

Working links have also been developed between SPA and other organizations, including the African Medical Research Foundation, American Foundation for AIDS Research, Commission of the European Communities, Family Health International, International Council of Nurses, International Planned Parenthood Federation, Fondation France Liberté, Fondation Mérieux, League of Red Cross and Red Crescent Societies, Médecins du Monde, Médecins sans Frontières, National Academy of Sciences (USA) - Institute of Medicine, National Council for International Health, Nordic Red Cross Societies, Organization for Coordination and Control of Endemic Diseases in Central Africa, Panos Institute, Project Hope, Terre des hommes, World Council of Churches, World Emergency Relief, World Hemophilia AIDS Center.

The League of Red Cross and Red Crescent Societies and National Societies

SPA is working actively with the League (including partial support for the AIDS specialist post in League Headquarters) and with individual Red Cross Societies, particularly in areas of blood donor screening and public education. A highlight of this collaboration was the meeting of Nordic Red Cross and Foreign Cooperation Agencies, organized by the Norwegian Red Cross in Oslo from 8-9 January 1987.

Health promotion

Information about AIDS is vital

WHO activities on AIDS and details of recent developments have been regularly conveyed through the *Weekly Epidemiological Record* (WER).

- Since the beginning of 1986, more than 40 articles on AIDS and related subjects have been published in WER.
- An AIDS information kit is updated and distributed every three months to regional offices, ministries of health and permanent missions in Geneva. It serves as a basic source of information for press releases and responses to press inquiries. The updates incorporate the most recent information on virology, immunology, epidemiology, treatment, diagnosis and vaccine development.
- Telex messages are sent to regional offices promptly when new information or developments occur (e.g., AZT field trial results, Ribavirin study data).

A consultation on AIDS Public Health Communication will be held at WHO Headquarters in Geneva from 6-9 July 1987. The discussions of 28 participants from 19 countries will present a global picture of active national AIDS communication programmes. The consultation will provide a forum for the exchange of strategies and materials, and the critique of a draft WHO manual on public health communication strategies for the prevention and control of AIDS.

In June, SPA will distribute an AIDS information brochure and prevention poster. SPA is also producing a health promotion manual to provide Member States with a practical guide for this essential component of the National AIDS Programme. A one-day workshop on use of the manual is also being designed for members of National AIDS Committees.

The Media

Frequent contact with the media is used to keep the public informed of the global AIDS situation and SPA/WHO activities.

- A press conference has followed most meetings on AIDS held at WHO Headquarters, so that the results and recommendations are widely and immediately available.
- 15 to 40 media inquiries are received daily about AIDS and SPA's activities.
- SPA has collaborated with the *Reader's Digest* to compile a question and answer sheet on AIDS and HIV infection. This tear-out sheet will appear in all 39 editions (15 languages) of the June issue. *Reader's Digest* estimates its readership at 100 million people worldwide.

Preparation and distribution of guidelines

Guidelines for the prevention and control of AIDS are being prepared. The formulation of these materials involves bringing together key scientists, public health officials, and policy makers from as broad a range of countries as possible.

- **Guidelines for the prevention and control of infection with LAV/HTLV-III (HIV)**, issued in May 1986, are currently under review by SPA. These guidelines cover: precautions for health care workers, providers of pre-hospital emergency care and laboratory staff; management of parenteral and mucous membrane exposures; considerations relevant to personal service workers, food service workers and workers sharing the same work environment; prevention of parenteral transmission through blood and blood products; and disinfection and sterilization, including commonly available disinfectants, sterilization and processing of needles and syringes.
- Based on the above recommendations, a practical wall chart showing essential precautions to prevent HIV-transmission is being designed for use in clinics.
- **Guidelines for the prevention of sexual transmission** are currently being prepared.
- **Guidelines for nurses** on the care of patients with AIDS and HIV infection are being produced jointly by SPA and the International Council of Nurses (ICN). WHO and ICN have also issued a joint declaration on AIDS. ICN has committed itself to full partnership with WHO in working for the interests of the public, those infected with HIV and those providing care to them.
- **Guidelines on immunization and HIV-infection** prepared within the framework of WHO's Expanded Programme on Immunization, emphasize that adherence to recommended practices regarding sterilization of reusable needles and syringes will eliminate any risk of HIV transmission through immunization. A joint WHO/UNICEF statement on immunization and AIDS was issued in February 1987.
- **A clinical manual on AIDS in Africa** is being prepared.
- **International travel and HIV** was the subject of a consultation convened by SPA on 2-3 March in Geneva. Three issues were addressed: whether international travellers should be screened for HIV, whether the travel of HIV-infected persons by public conveyance should be restricted; and recommendations for international travellers on the prevention of HIV infection. It was concluded that:
 - at best, and at great cost, the screening of international travellers would only briefly retard HIV from spreading, whether regarded from the global or the national perspective. Serious logistic, epidemiological, economic, legal, political and ethical problems would be inherent in any proposal for such screening, which would have to involve both national and foreign entrants.
 - The diversion of resources from educational programmes and measures to protect the blood supply is not justified.

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- there is no reason to prevent HIV-infected persons from using trains, buses, airplanes, cars, or ships, since there is no risk for others of infection from sharing the same conveyance.
 - the routes of transmission, the behaviour that puts an individual at risk, and the preventive measures are the same, regardless of whether the individual is travelling or remains in one country. Educational material should be made available to international travellers, to increase their awareness of how HIV is transmitted and how it can be prevented.
 - **Guidelines on counselling of HIV-infected persons and AIDS patients**
are being developed as a result of a consultation organised by SPA in Geneva from 7-9 April 1987. An international group of clinicians, social workers, psychiatrists and sociologists from six countries worked to design generic guidelines.
 - **Criteria for HIV screening programmes**
SPA is organizing a meeting to develop criteria to be considered whenever a programme for HIV screening is under discussion. The meeting is being held at WHO Headquarters in Geneva from 20-21 May 1987.

Research and development

The focus of SPA's Research and Development Unit is to coordinate, promote and support biomedical, epidemiological, behavioural, operational and economic research and development. These activities are supported by an international network of WHO Collaborating Centres on AIDS (see page 34). A meeting of WHO Collaborating Centre directors will be held in Washington on 6 June 1987, following the Third International Conference on AIDS.

Examination of testing kits

Using a panel of reference sera, the collaborating centres have evaluated test kits for HIV antibody detection produced by 13 manufacturers. In October 1986, a letter was sent to manufacturers of test kits indicating WHO's strong interest in the development and evaluation, including field testing, of HIV antibody detection methods that are fully adapted to conditions in the developing world. WHO expressed its willingness to assist in the coordination of evaluation and field testing, and several manufacturers have been working with WHO in this area.

Global banks for reference sera and for HIV and related retroviruses

A global serum bank, including geographically and temporally representative sera, is being established. WHO reference sera from patients in Europe and the USA have already been made available on request to national laboratories for evaluation of antibody tests. A collection of human sera of known reactivity with HIV was evaluated by a variety of immunoassays in an international collaborative study involving 21 laboratories. A WHO-coordinated network ("bank") for HIV and related retroviruses is being established to ensure that a

collection of well characterized viral strains, geographically and temporally representative of the global situation, will be freely available to scientific researchers.

AIDS vaccine efficacy trials in human populations

In anticipation of the need to test candidate AIDS vaccines in humans, SPA invited 13 scientists from ten countries to WHO Headquarters from 15-16 December 1986. The participants agreed on the following general concepts regarding evaluation of candidate AIDS vaccines:

- Efforts to develop AIDS vaccines establish a new era in vaccine development.
- Testing of candidate AIDS vaccines will be complex, difficult and time-consuming. An AIDS vaccine for general use will not be available, if at all, before 1991 and is unlikely to be available before the mid-1990s.
- Given the complexity of the problem, including ethical and social dimensions, along with the paramount global importance of developing a safe and effective AIDS vaccine, international cooperation and collaboration and open information exchange are essential in the evaluation of candidate AIDS vaccines.
- There is an urgent need for advance planning of clinical trials of potential AIDS vaccines.

It was recommended that SPA should establish a mechanism to ensure the open exchange of the scientific, social and ethical information necessary for advance planning and international collaboration in the clinical testing of candidate AIDS vaccines, with particular reference to phase three trials.

Newly Identified HIV-related retroviruses

In view of the identification of additional human retroviruses, SPA convened a meeting in Geneva from 11-12 February 1987. It was attended by 27 participants and 39 scientific observers from 26 countries. The virology, immunology, serodiagnosis, epidemiology and clinical aspects of HIV-related retroviruses, isolated principally in West Africa, were discussed. These viruses appear antigenically closer to the simian immunodeficiency virus (STLV-III) than to HIV. Some isolates appear to be associated with clinical AIDS and some appear to be of low pathogenicity.

The meeting concluded that the relationship among isolates is not clear and that further research is required. Although the epidemiology is not well defined, the HIV-related retroviruses appear to be transmitted by the same routes as HIV and therefore the same precautions are recommended to prevent infection. The meeting recommended that WHO play an active role in the exchange of information and reagents. Specifically, SPA is organizing working groups to develop criteria that will facilitate the comparison of HIV-related retroviruses, and to propose a system that will ensure the international exchange of human retroviral reagents, including virus isolates and sera ("bank", see above). In

collaboration with the governments of countries in West and Central Africa, a meeting will be organized on the virology and epidemiology of HIV-related retroviruses and on prevention and control programmes.

The designation of a WHO Collaborating Centre on Simian and Related Retroviruses at the Department of Cancer Biology, Harvard School of Public Health (USA) has been proposed to help ensure close communication between SPA and the rapidly evolving field of simian retroviral research.

Immunology of AIDS

A meeting on the immunology of AIDS, sponsored by WHO and the International Union of Immunological Societies, was held in Geneva from 18-19 February 1987. Eleven participants from seven countries discussed the most recent developments and reviewed the underlying immunological abnormalities. The summary report will be published in *The Bulletin of the World Health Organization* and elsewhere in the scientific literature.

Breast-milk and HIV transmission

HIV has been isolated in human breast-milk. A very small number of cases of possible postnatal transmission of HIV through breast-milk have been reported. However, the respective roles of intrauterine, peripartum and breast-feeding periods in perinatal HIV transmission are unclear. To address these issues, SPA will organise a consultation of ten experts from eight countries in Geneva in June 1987. Given the nutritional and immunological importance of breast-feeding for the majority of children throughout the world, and the policies that have been adopted by different countries over the past ten years concerning the promotion of breast-feeding, it is vital that the role of breast-milk and breast-feeding in HIV transmission be clarified and appropriate recommendations prepared. WHO Guidelines previously prepared in collaboration with the maternal and child health programme stress the need to maintain current breast-feeding policies while awaiting results of ongoing studies.

Contraception and AIDS

Condoms, other barrier methods and spermicides are proposed to prevent HIV transmission during coitus. In addition, the relationship between hormonal contraceptive methods and HIV transmission has not been systematically reviewed. To stimulate further targeted research, SPA is organizing a meeting in collaboration with the Special Programme of Research, Development and Research Training in Human Reproduction (HRP). Ten participants from six countries will meet at WHO Headquarters in Geneva from 13-15 May 1987.

Psychosocial research needs

SPA is convening a consultation on psychosocial factors and research needs in HIV infection and AIDS in Geneva from 25-28 May 1987. Twenty participants from 18 countries will meet to determine and assign priority to current and future needs for research which are appropriate to health planning and education. Methods and approaches will be proposed for studying social issues and a core group of biosocial scientists who can collaborate with WHO in strengthening

national research capabilities will be established.

Maternal and Child Health/Family Planning and HIV transmission

Mothers and children are being increasingly exposed to risks of HIV transmission. Health workers who come into contact with mothers or women of reproductive age can play an important role in counselling, educating and helping identify high-risk individuals or groups. Maternal and Child Health and Family Planning (MCH/FP) services, because they serve this particular age group, and because in almost all countries they have high coverage and acceptability, are ideally suited to the provision of HIV preventive services. In collaboration with the WHO Division of Family Health, SPA is bringing together 15 participants from 13 countries for a consultation in June 1987 in order to review the tasks that different health-workers perform, and the roles and responsibilities for AIDS prevention and control that could be assumed. The Consultation will define tasks, educational inputs and critical intervals in the process of MCH/FP care at which specific interventions could be provided.

Blood and blood products

As part of the follow-up to the meeting of experts on blood and blood products (April 1986), detailed recommendations were published in the *Weekly Epidemiological Record* regarding information for the public concerning the risk of HIV-infection, donor education and testing of blood donations for antibodies to HIV. The meeting on HIV-related retroviruses (described above) recommended that Member States take into account the epidemiology of the newly identified retroviruses (LAV-2 and HTLV-4) when establishing and reviewing country or regional blood donor screening policies.

Other important scientific meetings co-sponsored by WHO

- Second International Conference on AIDS, Paris, France, 23-25 June 1986
- International Conference on AIDS in Children, Adolescents and Heterosexual Adults, Atlanta, USA, 19-21 February 1987
- Third International Conference on AIDS, Washington, USA, 1-5 June 1987

Surveillance, forecasting and impact assessment

Surveillance

A weekly update of the AIDS case report to WHO is prepared and distributed. As of December 1982, only 711 AIDS cases had been reported to the World Health Organization from 16 countries. However, by 1 April 1987, 45,700 AIDS cases were reported to WHO from 104 countries representing all continents (Figs. 1 and 2). An additional 29 countries have informed WHO that they have no cases to report.

A reporting form which includes the age and sex of AIDS cases, clinical diagnosis and broad risk groups has been provided to all Member States. Reticence in reporting of cases from some areas, combined with under-recognition of AIDS and under-reporting to national health authorities, has meant that the number of reported AIDS cases represents only a fraction of the total cases to date, which are estimated to exceed 100,000. WHO considers the number of countries reporting AIDS to be more indicative of the geographical extent and more relevant to an assessment of the scope of the HIV pandemic than the number of cases reported.

Predictive modelling and impact assessment

SPA is planning a series of seminars and meetings to develop and improve predictive modelling capabilities, by bringing together modellers, epidemiologists, virologists and representatives of other relevant disciplines.

The need for accurate estimates of national HIV seroprevalence has stimulated preparations for a meeting in Geneva to develop alternative strategies for collection and analysis of these data.

In order to evaluate the direct medical care costs for AIDS patients in the developing world, a collaboration with the World Bank is planned.

The demographic impact of HIV infection may be substantial. Strategies to assess and predict this impact, under development by USAID, will be evaluated for possible application in national and regional analyses.

Fig. 1 Number of countries reporting on AIDS to WHO
as of 15 April 1987*

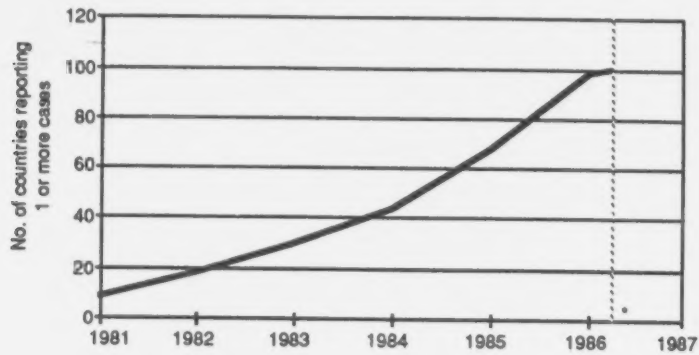
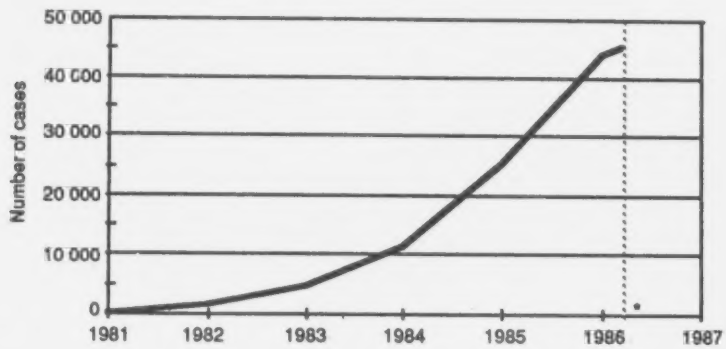


Fig. 2 Cumulative number of AIDS cases reported to WHO
as of 15 April 1987*



WHO collaborating centres on AIDS

The following centres are already designated or are in the process of being designated:

African region

Institut Pasteur, Boite postale 923, Bangui, Central African Republic

Kenya Medical Research Institute, University of Nairobi, Nairobi, Kenya

Region of the Americas

Department of Cancer Biology, Harvard School of Public Health (collaboration on simian and related retroviruses), 665 Huntington Avenue, Boston, Massachusetts 02115, United States of America

Laboratory Centre for Disease Control, Tunney's Pasture, Ottawa, Ontario, Canada K1A 0L2

AIDS Program, Center for Infectious Diseases, Centers for Disease Control, Atlanta, Georgia 30333, United States of America

National Institutes of Health, Building 1, Room 111, Bethesda, Maryland 20205, United States of America

Fundação Oswaldo Cruz, Avenida Brasil 4365, Caixa Postal 926, 21040 Rio de Janeiro, Brasil

Center for Drugs and Biologics, Food and Drug Administration, 5600 Fishers Lane, Rockville, Maryland 20857, United States of America

South-East Asia region

National Institute of Virology, 20A Dr Ambedkar Rd, 411001 Pune, India

Faculty of Medicine, Department of Microbiology, Siriraj Hospital, Mahidol University, Bangkok, Thailand

European region

Institut de Médecine et d'Epidémiologie africaine et tropicales, Hôpital Claude Bernard, 10, Avenue de la Porte d'Aubervilliers, F-75944 Paris Cedex 19, France

Collaborating Centres on AIDS of the Federal Republic of Germany

- Department of Hygiene and Medical Microbiology, Max von Pettenkofer Institute, Pettenkoferstr. 9A, 8000 Munich 2
 - Institut für Klinische und Experimentelle Virologie der FU, Berlin (West)
 - Robert-Koch Institut, Berlin (West)
 - Paul-Ehrlich-Institut, Frankfurt
-

European region (Cont.)

National Institute of Hygiene, Gyali ut. 2-6, 1097 Budapest, Hungary

Central Public Health Laboratory, 61 Colindale Avenue,
London NW9 5HT, United Kingdom

National Bacteriological Laboratory, 10521 Stockholm, Sweden

Unité d'Oncologie virale, Institut Pasteur, 28, rue du Docteur Roux, F-75724 Paris
Cedex 15, France

Centro Nacional de Microbiología, Virología e Inmunología Sanitarias,
Majadahonda, Madrid, Spain

National Reference Centre for AIDS, Athens School of Hygiene, Athens, Greece

Institut de Médecine Tropicale "Prince Léopold", Nationalestraat 155, B-2000
Antwerp, Belgium

Department of Virology, Istituto Superiore di Sanità, Laboratorio di Virologia, Viale
Regina Elena 299, 00161 Rome-Nomentano, Italy

National Institute for Biological Standards and Control, Hampstead, London NW3
6RB, United Kingdom

D.I. Ivanovsky Institute of Virology, 16, Gamaleya Street, 123098 Moscow, Union
of Soviet Socialist Republics

Eastern Mediterranean region

Faculty of Medicine, Department of Virology, Kuwait University, Kuwait

National Institute of Health, Islamabad, Pakistan

US Naval Medical Research Unit, No 3 (NAMRU 3), c/o American Embassy,
Cairo, Egypt

Western Pacific region

National AIDS Reference Laboratory, Fairfield Hospital, Yarra Bend Road,
Fairfield, Victoria 3078, Australia

Institute for Virus Research, Kyoto University, Sakyo-ku, Kyoto 606, Japan

Department of Pathology, Singapore General Hospital, Singapore

WHO/SPA/GEN/87.4
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SPECIAL
PROGRAMME
ON AIDS

PROGRESS REPORT
NUMBER 2

NOVEMBER 1987



WORLD
HEALTH
ORGANIZATION

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Foreword

We are very proud that in the very short time since the Special Programme on AIDS was established, on 1 February of this year, a great deal has been accomplished.

- The global dimensions of AIDS are now recognized
- The scientific work on HIV and AIDS is firmly and irrevocably international
- The energies, commitment and creativity of many people - within WHO, in many countries throughout the world, in donor agencies, and in many multilateral and non-governmental agencies - have been catalyzed and directed towards AIDS prevention and control
- The Global AIDS Plan has been designed, the funding to begin its implementation has been provided, and the support of all countries has been marshalled behind WHO as the directing and coordinating agency in this global fight against AIDS.
- Over 90 countries have entered into collaboration with the Special Programme on AIDS

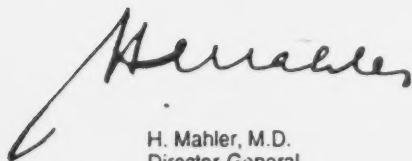
As I said, without hesitation, to a meeting of high level business executives in October in New York, we have created and mobilized a new programme - the Special Programme on AIDS - with a speed and energy which I challenged any of them to match.

Now that we have patted ourselves, briefly, on the back - let us recall that AIDS is certainly not defeated; available evidence indicates that the virus is continuing to spread and the number of AIDS cases climbs steadily. My scientific sources tell me that a vaccine may be even further away than we thought a year ago, and development of therapeutic agents has been frustratingly - although understandably - slow.

Indeed, part of our common struggle has been against defeatism. The voices of despair include those who say that people cannot change their sexual practices and those who claim that the epidemic has already progressed to such an extent in some areas that these areas might as well be abandoned by the rest of the world.

Against these voices we have firmly placed WHO's moral and technical authority. Against the voices calling for costly and unreasonable and ineffective control measures such as screening of travellers, we have placed the collective voice of international experts. Against the threat of chaos and confusion in organizing support to developing countries, we have constructed a logical and transparently open planning process.

As a reader of this Progress Report, I invite you to consider our collective progress towards controlling AIDS as well as the barriers to further progress. We are counting on your deliberation, your assessment and your creativity to help overcome these barriers and help make global AIDS control a reality.



H. Mahler, M.D.
Director-General

Introduction

For the Special Programme on AIDS, this Second Progress Report provides a valuable opportunity to reflect on events in recent months and future directions.

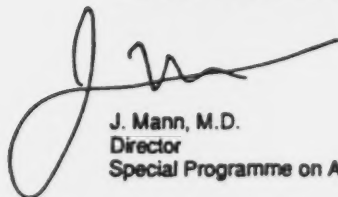
One year ago, in November 1986, the Special Programme had still to be created. Today, having received strong support from both within and from outside of the United Nations system, the Special Programme is actively coordinating and directing the global fight against AIDS.

A remarkable constellation of people and institutions has enabled the Special Programme on AIDS to accomplish the considerable work outlined in this Report.

- Over 200 people have made extraordinary personal commitments of time and effort to the work of the Special Programme. As members of the Special Programme's growing permanent staff, as short-term consultants, as participants in expert committees, these individuals have travelled to over 90 countries and have made exceptional efforts in the service of AIDS control.
- The Programme has benefited from the generosity of many governments and organizations — bilateral, multilateral, non-governmental, and voluntary — which have provided the Special Programme with strong and consistent moral support, with advice and guidance, and with the human resources and financial support required to implement global leadership. They have also provided the strong leadership outside of the Organization which has borne fruit in the World Health Assembly, the Economic and Social Council, and, most recently, in the United Nations General Assembly.
- The coordinated logistic, technical and administrative help and guidance from many parts of the Organization itself — in headquarters, regional offices and countries — has been crucial.

During the Special Programme's first six months, support to national AIDS programmes has received the highest priority. As a result, we have provided an exceptional level of technical and financial support to national AIDS programmes on all continents. At the same time, we have continued, and even accelerated, our global activities. During the coming year we plan to extend our national support to every country in the world which seeks this collaboration, and we also expect to develop extensively our role in social, behavioural, biomedical, and epidemiological research and development.

This report describes what we have accomplished together since April 1987. However, the challenges before us have increased not diminished. Infection with human immunodeficiency virus continues to spread, AIDS cases increase, and political reaction, discrimination and fear threaten. Yet we draw confidence from what has thus far been accomplished and from the scientific, social and political mobilization which is now well underway. If we can continue to call upon the same dedication, commitment, generosity of spirit and global energy which we have thus far been privileged to experience, we will indeed dominate this new disease, AIDS.



J. Mann, M.D.
Director
Special Programme on AIDS

Highlights

The Global AIDS Plan

Endorsement of the Global AIDS Strategy and Support of WHO's Global Leadership:

- The United Nations General Assembly
- The Economic and Social Council of the United Nations
- The World Health Assembly
- The Venice Summit

National Programme Support

- National AIDS Committees established in 151 countries
- US\$18.9 million to support and strengthen national AIDS programmes
- Over 250 consultant missions
- Requests for collaboration from 127 countries
- Initial visits to 93 countries, 34 more scheduled
- 58 short-term plans complete
- 25 medium-term plans complete
- US\$21 million mobilized in five country donor meetings

Global Activities

- 127 countries now reporting AIDS cases to WHO
- 32 meetings and consultations held on global research and policy issues from 1 May to 1 November 1987 including:
 - III International AIDS Conference
 - WHO/Australian Inter-regional Ministerial Meeting
 - Pan American Teleconference on AIDS
- Over 30 consensus statements, reports, guidelines and articles have been issued including:
 - Criteria for Screening for HIV
 - Breast-feeding/Breast Milk and HIV
 - Contraceptive Methods and HIV
 - Routine Childhood Immunization and HIV
 - Internationally endorsed nomenclature and criteria for characterization of HIV-related retroviruses

The Global AIDS Plan

The Global Strategy for the prevention and control of AIDS, developed by the Special Programme on AIDS (SPA) of the World Health Organization (WHO) has received the support of every nation of the world.

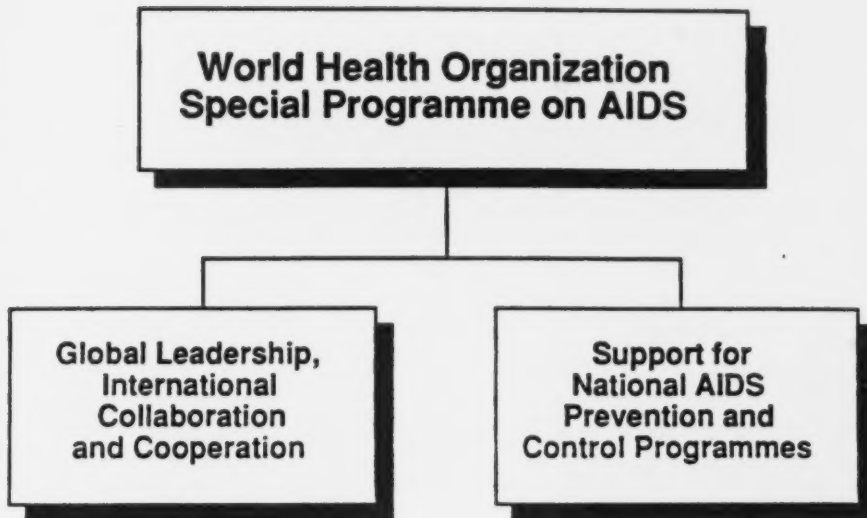
The Fortieth World Health Assembly meeting in Geneva in May 1987, unanimously adopted resolution WHA40.26 (annex 1) which endorsed the World Health Organization's Global Strategy for the prevention and control of AIDS.

The Venice Summit of the Heads of State or Government and the representatives of the European Community, meeting in June 1987, stated: "The World Health Organization (WHO) is the best forum for drawing together international efforts on a worldwide level to combat AIDS, and all countries should be encouraged fully to cooperate with the WHO and support its special programme of AIDS-related activities."

The Economic and Social Council of the United Nations meeting in Geneva from 24 June to 9 July 1987, unanimously adopted resolution E/1987/75 (annex 2) which urges all organizations of the United Nations system to support the worldwide struggle against AIDS in close cooperation with the World Health Organization in its role of directing and coordinating the urgent fight against AIDS and in conformity with the Global Strategy.

The United Nations General Assembly, at its forty-second session in New York in October 1987, unanimously adopted Resolution A/42/8 (annex 3) which, *inter alia*:

- confirms that the World Health Organization should direct and coordinate the urgent global battle against AIDS;
- urges Governments which have not done so to establish national AIDS control programmes in line with WHO's Global Strategy;
- urges all appropriate organizations of the United Nations system, including the specialized agencies, bilateral and multilateral agencies and non-governmental and voluntary organizations, in conformity with the Global Strategy, to support the worldwide struggle against AIDS;
- invites the Director-General of WHO to report to the forty-third session of the General Assembly.



Goals

- Prevent AIDS virus transmission
- Care for AIDS virus-infected people
- Unite national and international efforts against AIDS

Office of the Director

As spokesman for the Global AIDS Plan, the Director of SPA has visited five of the six WHO regions during the period 1 May to 1 November 1987. At the invitation of Member States and as speaker at major conferences, the Director has visited 17 countries: Australia, Belgium, Cuba, Ecuador, Egypt, France, Greece, Haiti, Italy, Japan, Mexico, Norway, Uganda, United Kingdom, Union of Soviet Socialist Republics, United States of America and Zaire.

Significant recent statements:

- Forty-second Session of the United Nations General Assembly, New York, 20 October 1987
- World Health Assembly, Geneva, 5 May 1987
- III International AIDS Conference, Washington, D.C., 2 June 1987
- United States House of Representatives Committee on Science, Space and Technology, Washington, D.C., 17 September 1987
- UNESCO General Conference, Paris, 28 October 1987

Key meetings

Key meetings held during the past few months have catalyzed the implementation of the Global Strategy and been significant landmarks in AIDS prevention and control.

WHO/Australian Inter-regional Ministerial Meeting on AIDS

A meeting of ministers of health, senior health advisers, clinicians and laboratory experts from over 30 countries in the Western Pacific and South East Asian regions was organized by the Australian Government and WHO in Sydney from 21-24 July 1987. With the exception of Australia and New Zealand, the epidemiological pattern of AIDS and HIV infection in the regions is markedly different from the pattern seen in Africa and the pattern in industrialized countries. The meeting was organized to stimulate development of national AIDS plans and programmes and to facilitate appropriate collaboration.

A declaration issued by the meeting:

"urged the participating Governments to take full advantage of the opportunity for prevention and promptly establish or strengthen national programmes to prevent and control AIDS, in balance with other health programmes and in conformity with the WHO Global Strategy".

Pan American Teleconference on AIDS

A regional AIDS conference, organized by the Pan American Health Organization and SPA in Quito, Ecuador from 14-15 September 1987 was transmitted by satellite to over 650 locations and over 50,000 health workers "attended" the teleconference. SPA supported the attendance in Quito of 25 participants from 14 countries. This meeting has played a catalytic role throughout Latin America.

Major conferences

Several major conferences on AIDS have been jointly organized or co-sponsored by WHO:

III International Conference on AIDS

The International Conference on AIDS is co-sponsored by WHO annually. Over 7 000 participants and more than 1 000 journalists attended the third Conference held in Washington, D.C. from 1-5 June 1987.

The Conference remains the major annual event for presentation and exchange of scientific information in the fields of AIDS epidemiology, virology, molecular biology, immunology, serology, animal models, neuropsychiatric aspects, oncology, diagnostic tests, clinical manifestations, behavioural and addiction aspects, public health, ethical and psychosocial implications and prevention and control strategies. SPA supported the attendance of 59 participants from 25 countries.

WHO/Japan Conference on Integrated Strategy for the Control of AIDS and other Human Retroviral Infections and Hepatitis B

This conference was jointly organized by WHO and Japan with the objective of developing an integrated approach to the prevention of HIV, other human retroviral infections and hepatitis B. Thirty-five participants from 21 countries attended the conference held at the Sasakawa Health Foundation in Tokyo, Japan from 5-8 October 1987.

Second International Symposium on AIDS and Associated Cancers in Africa

WHO co-sponsored the Second International Symposium on AIDS and Associated Cancers in Africa, held in Naples, Italy from 7-9 October 1987. To promote and stimulate cooperative research, SPA supported the participation of 26 researchers from African countries. The meeting will be held annually as a permanent forum for researchers from African and non-African countries.

World Summit of Ministers of Health on Programmes for AIDS Prevention

The Fortieth World Health Assembly, in Resolution WHA40.26 (annex 1), emphasized that information campaigns and improved public health education are essential elements if the spread of AIDS is to be controlled.

A World Summit of Ministers of Health on Programmes for AIDS Prevention to be held in London from 26-28 January 1988, is being organized jointly by WHO and the Government of the United Kingdom. Invitations have been issued to ministers of health from the 166 Member States of WHO, to UN agencies, intergovernmental organizations and non-governmental organizations. The overall objective of the meeting is to provide ministers of health and senior policy-makers with a forum on strategies for AIDS prevention and control with particular emphasis on information and education. SPA will support the participation of 90 delegates from 58 countries.

WHO Consultations

Criteria for screening programmes for HIV

The complexity of screening for HIV infection was considered at a meeting on 'Criteria for HIV screening programmes', convened by SPA in Geneva from 20-21 May 1987. Twenty-one participants from 17 countries attended the meeting, including epidemiologists, virologists, experts in legal medicine and ethics, social and behavioural scientists and disease control specialists.

The meeting developed a comprehensive list of criteria which should be explicitly addressed in the planning of any HIV screening programme. These criteria include: programme rationale; population selected; test methodology; location of laboratory testing; data management and confidentiality; plan for informing the person; counselling; social impact; legal and ethical considerations including informed consent.

These criteria are designed to serve public health interests while protecting respect for human rights. Their application will help ensure the most effective outcome from screening programmes carried out as part of HIV prevention and control strategies.

The full report of the meeting (WHO/SPA/GLO/87.2) has been distributed to all ministries of health and national AIDS committees.

Screening for HIV of participants attending WHO meetings

Following consideration of the reports of the above meeting and the meeting of International Travel and HIV (WHO/SPA/GLO/87.1), the Director-General issued the following directive for all WHO programme activities:

"The screening of international travellers for human immunodeficiency virus (HIV) has been carefully considered and WHO's technical guidance on this issue is that, at best and at great cost, such screening would only briefly retard the spread of HIV, whether regarded from the global or the national perspective. Serious logistic, epidemiological, economic, legal, political and ethical problems would be inherent in any such screening.

However, one of the UN agencies, in organizing training seminars with participants from developing countries, has come under pressure from the host country government to request screening tests for HIV and a certificate of seronegativity for participants from abroad.

Should this issue arise with respect to any programme activity organized by WHO, please ensure that it is dealt with in keeping with WHO's Global Strategy, including the above-mentioned technical guidance. Should governments insist on such screening in spite of this guidance, WHO will have no alternative but to relocate the programme activity concerned."

Prevention of HIV transmission through injections

SPA convened a meeting within WHO on the prevention of HIV transmission through injections and other skin-piercing procedures on 8 July 1987. The urgency of the issues raised in that meeting led the Director-General to issue a 'note verbal' to all ministers of health of Member States on the subject (annex 4).

HIV and routine childhood immunization

A consultation was jointly sponsored by SPA and the Expanded Programme on Immunization (EPI) to review available information on HIV infection and immunization in order to assess the need for modification of the guidelines established in 1986 by the Global Advisory Group of EPI. The meeting, held in Geneva from 12-13 August 1987 was attended by 13 participants from eight countries including immunologists, virologists, disease control specialists, infectious disease specialists and experts in immunization and epidemiology. After reviewing all available information, the participants endorsed the Global Advisory Group's recommendation on the use of EPI antigens. Therefore, EPI immunizations are recommended for HIV-infected infants and children except for those with clinical manifestations of AIDS for whom BCG is to be avoided. A joint SPA/EPI statement from the meeting was published in the *Weekly Epidemiological Record* (WER (1987, 2 Oct.) 62 (40): 297-299) and the full report of the meeting (WHO/SPA/GLO/87.3) will be available shortly.

Prevention and control of AIDS in prisons

Prevention and control of AIDS in prisons will be discussed in a consultation convened by SPA in Geneva from 16-18 November 1987.

The Consultation will involve 25 medical, administrative and political experts from 20 countries who will consider the special issues relating to AIDS in prisons.

Informal Consultation on inter-relations of AIDS and Tropical Diseases

An informal consultation on inter-relations of AIDS and Tropical Diseases is being jointly organized by SPA and the Special Programme for Research and Training in Tropical Diseases (TDR). Up to 50 participants from 20 countries will participate in the meeting being held at the Kenya Medical Research Institute in Nairobi from 1-4 December 1987.

WHO Collaborating Centres on AIDS

The Third Meeting of the WHO Collaborating Centres on AIDS was held in Washington D.C. on 6 June 1987. The meeting adopted three consensus statements: Transmission of HIV; HIV infection and health workers; Present and future developments in laboratory Testing of HIV. The report of the meeting will be published in the *WHO Bulletin* (Bull WHO (1987) 65 (6)) and has appeared in summary form in the *Weekly Epidemiological Record* (WER (1987, 24 Jul.) 62 (30): 221-228).

WHO Collaborating Centres on AIDS are actively working with SPA by training laboratory workers, preparing documents, evaluating test kits, and preparing and standardizing reagents and reference material. Technical support has been drawn from several centres to conduct epidemiological assessments in countries in Africa and formulate short-term plans of action.

Prior to the next meeting of Collaborating Centres, to be held in conjunction with the IV International AIDS Conference in Stockholm in June 1988, each Centre will assess its resources for providing further support to national, regional and global SPA activities.

During 1988, a substantial number of collaborating centres will be designated in Africa. In addition, collaborating centres in health education and social and behavioural research will be identified.

Collaboration within WHO

Examples include:

BLG Biologicals

Consultation on blood and blood products, 9-11 December 1987

CDD Diarrhoeal Diseases Control

Consideration of HIV-associated diarrhoeal diseases in CDD evaluations

CDS Communicable Diseases

SPA participation in a meeting organized by the Programme of Sexually Transmitted Diseases, on the 'Prevention and Control of Sexually Transmitted Diseases including AIDS in Young People', 12-16 October 1987.

Discussions on liaison between SPA and the Sexually Transmitted Disease Programme

DAP Action Programme for Essential Drugs

Discussions regarding anti-HIV drugs

EPI Expanded Programme on Immunization

Joint consultation on HIV and routine childhood immunization, 12-13 August 1987

FHE Family Health

Technical working group on HIV infection and family planning

Technical working group on perinatal transmission of HIV and the relationship of breast-feeding to infection in infancy

Joint consultation on breast-feeding/breast milk and HIV infection, 23-25 June 1987

HLE Health Legislation

Information on legislation and policies introduced by Member States in regard to AIDS and HIV infection is being collected and disseminated upon request. A more formal survey of national legislation in this area is underway.

HRP Research Development and Research Training in Human Reproduction

Joint meeting on contraceptive methods and HIV infection, 29-30 June 1987

HST Epidemiological Surveillance and Health Situation and Trend Assessment

Survey methodology design

IEH Public Information and Education for Health

Press conferences, distribution of news releases

JMS Joint Medical Services

Adviser for policy on HIV and WHO staff

MNH Mental Health

Technical working group on intravenous drug use and HIV infection

NUR Nursing

Joint consultation on nursing and HIV infection (March 1988) will:

- finalize WHO/International Council of Nurses guidelines for nurses
- develop core curriculum module of education for student nurses

ORH Oral Health

The integration of education on HIV prevention throughout the ORH programme

Letter on "Dentists' professional and ethical responsibilities for HIV-positive patients and patients with AIDS" to all governments and dental associations

Two-day meeting on infection control and the role of industry

Seminar on role of the dental profession in HIV prevention. Courses in 11 countries on oral manifestations of HIV infection and role of oral health personnel

Preparation of slide set and companion booklet for wide dissemination

TDR Research and Training in Tropical Diseases

Joint meeting on inter-relations of AIDS and tropical diseases, 1-4 December 1987

Collaboration

The United Nations Family

The United Nations General Assembly

At the invitation of the Secretary-General of the United Nations, the Director-General of WHO and the Director of SPA presented the global AIDS problem and the Global AIDS Plan to a briefing of the forty-second session of the United Nations General Assembly in New York on 20 October 1987.

After consideration of the report of the Economic and Social Council of the UN, resolution A/42/8 (annex 3) was unanimously adopted.

The resolution confirms WHO as the director and coordinator of the urgent global battle against AIDS and reiterates the call of the Economic and Social Council of the UN (annex 2: Resolution E/1987/75) for all appropriate organizations of the UN system to support the worldwide struggle against AIDS in conformity with WHO's Global Strategy.

SPA collaboration with UN agencies is accelerating as these bodies analyse the effect of HIV on their programmes and develop their plans of action in concert with the Global Strategy.

UNDP

UNDP has actively collaborated with SPA to ensure linkages at the national level. UNDP resident representatives have been informed about and involved in the national programme support activities of SPA. At the regional and global level close collaboration has been achieved for support and planning.

UNESCO

SPA and UNESCO have been actively collaborating in the promotion of AIDS education in schools. A joint UNESCO/WHO meeting of educational specialists was held in Paris from 29 June to 1 July 1987. The meeting formulated a plan of action on AIDS education in formal and informal educational settings which was presented to the UNESCO General Conference held in Paris in October 1987. The Director of SPA addressed the General Conference and Educational Section in support of this collaboration on 28 October 1987. SPA will support UNESCO's activity as an integral part of the Global AIDS Plan.

UNICEF

UNICEF has appointed a consultant to liaise with SPA to help define UNICEF's role in the Global AIDS Plan.

UNICEF participated in the consultation on HIV and routine childhood immunization and the consultation on breast-feeding/breast milk and HIV infection. UNICEF has participated in national donor meetings and other AIDS meetings.

UNFPA

UNFPA is collaborating with SPA in assessing the role of family planning and maternal and child health programmes in AIDS prevention and control activities. UNFPA participated in the consultation on contraceptive methods and HIV infection and the consultation on breast-feeding/breast milk and HIV infection. A joint policy document is currently under consideration.

World Bank

SPA and the World Bank are collaborating in studies of the economic impact of AIDS in the developing world and on the demographic impact of AIDS. Discussions have also started on a two-year research agenda concerning the economics and demography of AIDS.

ILO

The General Conference of the International Labour Organization (ILO) passed a resolution on AIDS at its seventy-fourth (Maritime) session, held in Geneva in September 1987. The Governing Board of the ILO is requested to consider, in close collaboration with WHO, undertaking a study on the health problems of seafarers.

AIDS educational activities will be discussed at the next session of the joint ILO/WHO Committee.

Other Organizations**World Tourism Organization**

SPA released an 'AIDS Information for Travellers' brochure at the General Conference of the World Tourism Organization (WTO) on 27 September 1987. WTO had endorsed the brochure and is now involving travel agents, airlines and tourism organizations in its reproduction and distribution.

American Foundation for AIDS Research (AMFAR)

SPA and AMFAR are working on a joint project for dissemination of technical and scientific information to developing countries.

International Council of Nurses (ICN)

SPA addressed the Meeting of National Representatives of ICN in Auckland, New Zealand on 15 August 1987. WHO/ICN have issued a joint declaration which speaks to the rights and responsibilities of nurses worldwide in caring for people with HIV infection. WHO/ICN guidelines for the nursing care of patients with HIV infection are under preparation.

Fondation Marcel Mérieux

SPA collaborated with the Fondation Mérieux in a symposium on "AIDS - Epidemics and Societies" on 20-21 June in Annecy, France.

League of Red Cross and Red Crescent Societies

SPA is working actively with the League (including partial support for the AIDS specialist post at League Headquarters) and with individual Red Cross Societies, particularly in the areas of blood donor screening and public education. Guidelines are under preparation.

SPA is actively working with other organizations including the Academy for Educational Development, African Medical Research Foundation, Commission of the European Communities, Family Health International, International Federation of Social Workers, International Planned Parenthood Federation, Fondation France Liberté, Médecins du Monde, Médecins sans Frontières, National Academy of Sciences (USA) - Institute of Medicine, National Council for International Health, Nordic Red Cross Societies, Organization for Coordination and Control of Endemic Diseases in Central Africa, Panos Institute, Project Hope, Save the Children Fund, Terre des hommes, World Council of Churches, World Emergency Relief, World Hemophilia AIDS Center.

Public information

Worldwide media interest in AIDS and in WHO/SPA activities has been consistently intense, reflected in the number of interviews and press conferences given by the Director-General and the SPA Director. In recognition of the responsibility to provide vital, accurate, timely, and potentially life-saving information, a Public Information Office was established within SPA in October 1987.

The AIDS Public Information Office has two goals: provide consistent, accurate and timely information to Member States and the public on AIDS; develop and strengthen SPA activities at the national, regional and global level. These goals will be achieved by working in concert with the Information and Education for Health Division of WHO.

Objectives of the SPA Public Information Office:

- provide timely information on AIDS and SPA to the media, both on request and as developments warrant
- increase the distribution, availability, and quality of public information about AIDS and SPA
- encourage careful and comprehensive reporting on AIDS and SPA
- provide public information counsel to SPA
- develop guidelines and materials in support of an information strategy for national AIDS programmes

AIDS: The Global Report

In March 1988, WHO will launch a new publication, 'AIDS: The Global Report'.

The book is aimed at the general public and will be widely available in bookstores throughout the world. It will be published annually as the authoritative state of the world report from the WHO Special Programme on AIDS.

SPA Staffing

Headquarters

As of 1 November 1987, SPA Headquarters staff (full and part-time) including secondments from other programmes, short-term consultants and temporary advisers involved a total of 41 professional and 25 general services staff (Table 1).

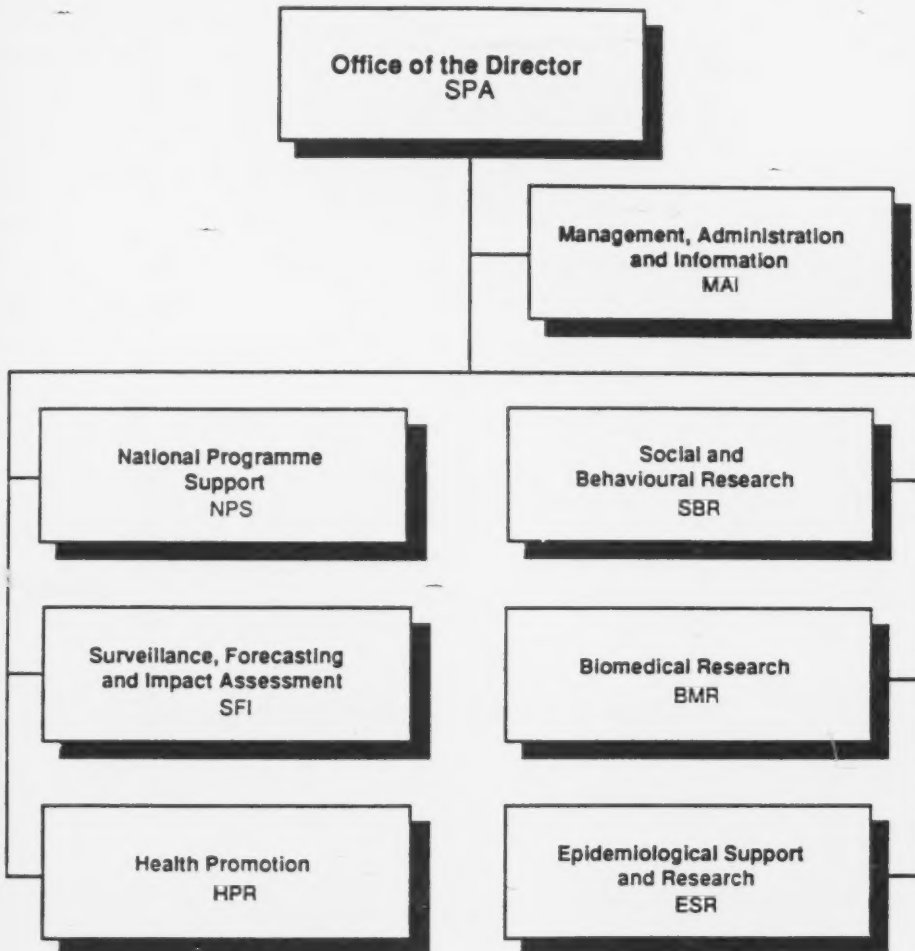
Regional

As of 1 November 1987, nine interregional professional posts located in regional offices have been established. Five additional posts are expected to be established by the end of 1987 and up to 15 further posts are in 1988. Secretarial staff in regional offices (ratio of 1 per two professional posts) will be supported by SPA.

Country

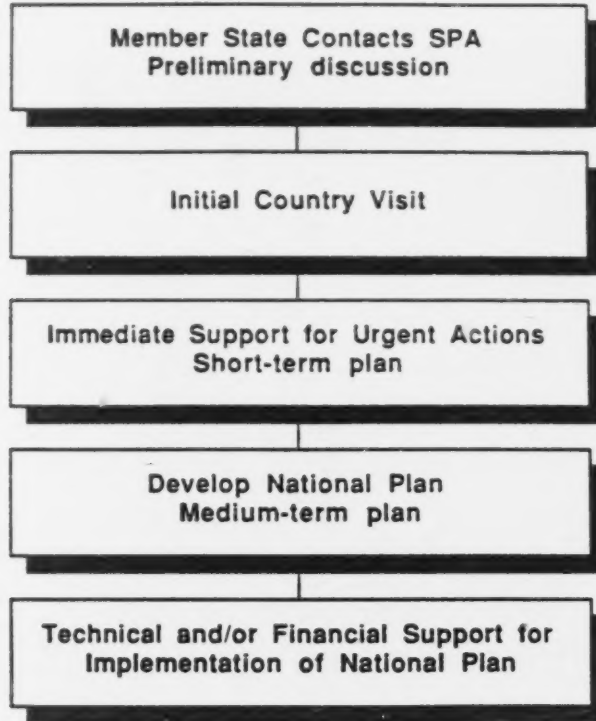
To support national AIDS control programmes, SPA will have established 12 posts in six countries by the end of 1987. Further posts will be established as country needs are defined in national medium-term plans.

Table 1
Organization of the Special Programme on AIDS



National Programme Support

SPA support to national programmes proceeds as outlined below:



Every country in the world needs a comprehensive national AIDS programme. Ultimately, AIDS cannot be stopped in any one country unless it is stopped in all countries.

- As of 1 November 1987, National AIDS Committees have been established in 151 countries.
- As 1 November 1987, SPA staff had visited 93 countries in response to requests from 127 countries for collaboration (Table 2). The remaining 34 visits have been scheduled to take place before the end of 1987.
- In close association with regional offices, SPA has completed over 250 consultant missions.
- SPA missions have resulted in the preparation of over 50 short-term (6-12 months) plans for national AIDS control programmes.
- 25 countries have now prepared 3-5 year (medium-term) plans and SPA is collaborating with a further 61 Member States in the preparation of these comprehensive medium-term plans.
- At a planning workshop to be held in Trinidad from 16-20 November 1987, participants from 19 Caribbean countries will formulate national AIDS prevention and control programmes.
- To date US\$ 11.3 million has been obligated and US\$ 7.6 million is earmarked for national programme support in 1987.
- National Donor Meetings have been held in five Member States: Uganda (21-22 May), Tanzania (23-24 July), Rwanda (27-28 July), Kenya (30-31 July) and Ethiopia (3-4 August). Each meeting was jointly organized by the Ministry of Health and WHO, following several months of collaboration leading to official endorsement of the medium-term national AIDS plan.

Each national donor meeting resulted in full funding for the first year of operation of the national AIDS programme. A total of US\$ 21 million was pledged at these meetings, with the funds to be made available either through SPA or bilaterally within the framework of the approved national AIDS plan. In each country a National Management Committee has been established to coordinate all the parties involved. SPA staff have been assigned in Uganda and official posts are being established in the four other countries to support further the implementation of the national AIDS plan.

Table 2

SPA/WHO collaboration with countries and areas in support of national AIDS programmes
(as of 1 November 1987)

■ completed □ ongoing or planned

Country or area	Assessment visit	Short-term plan	Immediate support*	Medium-term plan	Mobilization of interested parties
Afghanistan	■	■	□		
Albania	■	■	□		
Algeria	□				
Angola	■	■	□		
Anguilla	■		■	□	
Antigua and Barbuda	■		■	□	
Argentina	■	■	■	■	
Bahamas	■		■	□	
Bangladesh	□				
Barbados	■		■	□	
Belize	■		■	□	
Benin	■	■	■	□	
Bermuda	■		■	□	□
Bolivia	■			■	
Botswana	■	■	■	■	□
Brazil	■	■	■	■	
British Virgin Islands	■		■	□	
Bulgaria	■	■	□	□	
Burkina Faso	■	■	□	□	□
Burma	□				
Burundi	■	■	■	□	□
Cameroon	■	■	■	■	□
Cape Verde	■	■	□	□	
Cayman Islands	■		■	□	
Central African Republic	■	■	■	■	□
Chad	□				
Chile	■	■	□	□	
China	□				
Colombia	■			□	
Comores	■	■	□	□	

continued

Table 2 (cont)

Country or area	Assessment visit	Short-term plan	Immediate support*	Medium-term plan	Mobilization of interested parties
Congo	■	■	■	■	□
Cook Islands	□	□			
Costa Rica	■			■	
Cote d'Ivoire	■	■	□	□	□
Cuba	■			■	
Curacao	□				
Democratic Yemen	■	■	□	□	
Djibouti	□				
Dominica	■		■	□	
Dominican Republic	■	■	■	■	
Ecuador	■			■	
Egypt	■	□			
El Salvador	■	■	■	■	
Equatorial Guinea	□				
Ethiopia	■	■	■	■	■
Fed. States of Micronesia	□				
Gabon	■	■	□	□	□
Gambia	■	■	■	□	□
Ghana	■	■	□	□	
Greece	■	■	□	□	
Grenada	■		■	□	
Guatemala	□			□	
Guinea	■	■	□	□	
Guinea-Bissau	■	■	■	□	□
Guyana	■		■	□	
Haiti	■	■	■	■	
Honduras	■			□	
Iceland	■				
India	□				
Indonesia	□				
Iran	■	■	□	□	
Israel	□				
Jamaica	■		■	□	
Jordan	■	■	□	□	
Kenya	■	■	■	■	■
Kiribati	□	□			
Kuwait	■				
Lebanon	□				
Lesotho	■	■	■	□	□

continued

Table 2 (cont)

SPA/WHO collaboration with countries and areas in support of national AIDS programmes
(as of 1 November 1987)

■ completed □ ongoing or planned

Country or area	Assessment visit	Short-term plan	Immediate support*	Medium-term plan	Mobilization of interested parties
Liberia	■	■	■	□	□
Libyan Arab Jamahiriya	□				
Madagascar	■	■	□	□	
Malawi	■	■	■	□	□
Maldives	□				
Mali	■	■	□	□	□
Marshall Islands	□	□			
Mauritania	□				
Mauritius	■	■	■	■	□
Mexico	■	■	■	■	
Mongolia	■	■	□	□	
Montserrat	■		■	□	
Mozambique	■	■	■	■	□
Namibia	□				
Nauru	□				
Nepal	■	■	□	□	
Niger	■	■	■	□	□
Nigeria	■	■	■	□	□
Niue	□				
Oman	□				
Palau	□				
Panama	■			□	
Papua New Guinea	□	□			
Paraguay	■			□	
Peru	■			□	
Philippines	■				
Rwanda	■	■	■	■	■
St. Christopher and Nevis	■		■	□	
St. Lucia	■		■	□	
St. Vincent & the Grenadines	■		■	□	
Samoa	□	□			
Sao Tome et Principe	□				
Senegal	■	■	■	■	□
Seychelles	■	■	□	□	

continued

Table 2 (cont)

Country or area	Assessment visit	Short-term plan	Immediate support*	Medium-term plan	Mobilization of interested parties
Sierra Leone	■	■	■	□	□
Solomon Islands	□	□			
Somalia	□				
Sri Lanka	■	■	□	□	
Sudan	■	■	□	□	
Suriname	■		■	□	
Swaziland	■	■	■	□	□
Syrian Arab Republic	■	■	□	□	
Thailand	□				
Togo	■	■	□	□	
Tonga	□	□			
Trinidad and Tobago	■		■	□	
Tunisia	■	■	□	□	
Turks and Caicos Islands	■		■	□	
Uganda	■	■	■	■	■
United Rep. of Tanzania	■	■	■	■	■
Uruguay	■			■	
USSR	■				
Vanuatu	□	□			
Venezuela	■		■	□	
Viet Nam	□				
Zaire	■	■	■	■	□
Zambia	■	■	■	■	□
Zimbabwe	■	■	■	□	

* Technical Services Agreement (TSA) or other form of technical and financial support

127 countries have requested collaboration:

- 44 in Africa,
- 39 in the Americas,
- 15 in the Western Pacific
- 14 in the Eastern Mediterranean,
- 6 in Europe,
- 9 in South-East Asia

- 93 initial visits done, 34 scheduled
- 52 TSAs signed, 26 under preparation
- 58 STPs prepared, 9 scheduled
- 25 MTPs prepared, 61 scheduled
- 5 meetings held for mobilization of interested parties, 24 planned

The technical, logistic and administrative challenges inherent in this level of support to national programmes has required the development of guidelines, administrative tools and training workshops. Guidelines have been prepared on the development of medium-term plans, and on developing national policies for screening. Standard lists of laboratory equipment for serological (ELISA) testing for HIV have been prepared and are continuously updated to expedite procurement. Standardized systems of funding, budgeting and accounting for support to national programmes are being developed to accommodate the complex interaction of input from national, bilateral and multilateral (WHO) sources. Systems for monitoring the supply of equipment and test kits for HIV have been established. A collection of information and education material from various countries, including video and printed material, has been compiled.

Approximately 100 consultants from 23 countries have been oriented to SPA through two briefing sessions held in Geneva. The first (18-19 June 1987), concentrated on the formulation of short-term plans, while the second (12-14 October 1987), focussed on support to countries for the implementation of national AIDS plans.

A further session, to be held in Australia from 18-20 November 1987, will lead directly to the formulation of eight medium-term plans in the Western Pacific region.

SPA Laboratory Workshops

SPA has continued to conduct workshops to strengthen national capability for HIV antibody testing and screening. By the end of 1987 over 350 laboratory workers from 103 countries will have been trained in HIV antibody testing procedures. Three further workshops, in Abidjan, Dakar and Bangkok are planned to be held in the first quarter of 1988.

Table 3
SPA Laboratory Workshops on HIV Antibody Screening,
May - December 1987

Region	Date	Location	Countries Represented	Number of Participants
Africa	4-9 May 1987	Nairobi, Kenya	Kenya, Ethiopia, Gambia, Mozambique, Angola, Botswana, Swaziland	16
	22-26 June 1987	Ibadan, Nigeria	Nigeria (national workshop)	60
Americas	15-19 June 1987	Mexico	Cuba, Dominican Republic, Guatemala, Haiti, Mexico	12
	24-28 Aug 1987	Panama	Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Nicaragua, Panama, Venezuela	11
	26-30 Oct 1987	Rio de Janeiro, Brazil	Argentina, Bolivia, Brazil, Chile, Paraguay, Peru, Uruguay	14
Eastern Mediterranean	28 May - 2 June 1987	Cairo, Egypt	Egypt, Cyprus, Iraq, Jordan, Pakistan, Somalia, Sudan, Yemen Arab Republic	16
	21-26 Nov. 1987	Islamabad, Pakistan	Democratic Yemen, Iran, Libya, Pakistan, Syria	20
	December 1987	Kuwait	Afghanistan, Bahrain, Kuwait, Lebanon, Oman, Qatar, United Arab Emirates, Saudi Arabia	15
Western Pacific	2-6 Nov. 1987	Tonga	Samoa, Cook Island, Fiji, Guam, Kiribati, Papua New Guinea, Solomon Islands, Tonga, Vanuatu, French Polynesia, Marshall Islands, Micronesia, Palau, New Caledonia	16

Regional Activities

Regional offices play a major role in national programme support activities including planning missions and laboratory workshops. In addition, regional offices conduct a wide variety of activities of regional importance, in collaboration with SPA. Selected highlights of regional activities in support of the Global AIDS Plan are presented below:

Africa

The Regional Committee (Bamako, Mali, September 1987) expressed its commitment to AIDS prevention and control.

Five meetings of participating parties in support of national AIDS programmes have been held in Uganda, Tanzania, Kenya, Ethiopia and Rwanda.

A conference of ministers of health of the Organization of African Unity (OAU) held in Cairo, 29-30 April 1987, stressed the urgent need to enhance AIDS prevention activities in Africa. A summit meeting of the heads of OAU Member States and Government held in Addis Ababa, Ethiopia, from 27-29 July 1987 endorsed this recommendation.

An increasing number of countries are notifying AIDS cases and an increasing number of countries have established national AIDS committees.

A round table on the development of laboratory services in peripheral areas was held on 12-16 October 1987 to examine alternative HIV diagnostic methods.

The first workshop on counselling of HIV-infected persons and their families was held in Nairobi, Kenya from 29 September to 2 October 1987.

A workshop was organized in collaboration with the League of Red Cross and Red Crescent Societies in Cotonou, Benin from 20-23 October 1987. A further workshop was held in Harare, Zimbabwe from 27-30 October 1987 to discuss the participation of the League in AIDS prevention activities.

WHO collaborated in the production of a film on AIDS in Africa, produced by Fondation France Liberté.

The regional office is assessing the resources of more than 10 institutions for possible designation as WHO collaborating centres on AIDS.

Americas

The first Pan American Teleconference on AIDS was held in Quito, Ecuador on 14-15 September 1987. This conference summarized the available knowledge on the epidemiology, virology, clinical aspects and public health issues in AIDS. A final report is being prepared in preparation for the second Pan American Teleconference on AIDS, planned for 7-9 September 1988.

Health education materials have been collected from a large number of countries and have been shared throughout the region. Special efforts are underway to establish health education/information centres at CAREC and in Mexico by the end of 1987.

Technical assistance has been provided by PAHO/WHO SPA staff to all countries developing national AIDS prevention programmes. By mid 1988, all countries in this

hemisphere will have active AIDS prevention and control programmes.

A US\$ 5 million, five-year AIDS Research Programme Contract was signed with the US National Institutes of Health, National Institute of Allergy and Infectious Diseases. Protocol development is underway in four areas: AIDS seroprevalence epidemiological surveys; natural history of HIV, and related retroviruses, infections; heterosexual transmission of AIDS, and perinatal transmission of AIDS. Staff are being recruited for this research programme. This is a collaborative project between scientists of NIAID, PAHO and participating countries.

Quarterly surveillance has been established utilizing an adaptation of the WHO surveillance form and the revised WHO/CDC case definition. The AIDS situation in the Western Hemisphere is being actively monitored by the PAHO/WHO AIDS Surveillance Programme.

At the annual Regional Committee meeting in Washington, D.C. from 21-25 September 1987, the AIDS situation in the Western Hemisphere was actively discussed by all the delegations. An AIDS resolution calling on the countries to develop strong national AIDS prevention and control efforts was passed unanimously. All countries in the Hemisphere also subscribed to that part of the resolution which calls upon them to refrain from HIV testing of travellers.

South-East Asia

At the Regional Committee meeting held in the Democratic People's Republic of Korea in September 1987, a plan of action for AIDS prevention and control was approved.

A national surveillance meeting on AIDS is being held at the National Institute of Communicable Diseases in New Delhi, India from 16-19 November 1987.

Clinicians from Mongolia and Nepal have been supported to visit the United Kingdom and the United States of America to observe the management of AIDS and HIV infection. Thailand is planning a national workshop on the diagnosis of AIDS in late November 1987 as a prelude to an inter-country workshop to be held in early 1988.

Europe

The regional office participated in a number of meetings on AIDS organized by SPA headquarters and provided information on the current status of HIV-1 epidemic in the region.

The plan for EURO regional activities on AIDS was approved by SPA in July 1987.

A meeting on Training on AIDS for Personnel in Drug Treatment Centres, took place in Bremen, Federal Republic of Germany, 26-28 August 1987. The summary report is available from EURO.

A report on the current situation of the HIV epidemic in the region and the EURO programme on AIDS were presented to the thirty-seventh session of the Regional Committee in Bruges, 14-18 September 1987. A resolution affirming the importance of AIDS prevention activities was adopted unanimously.

Eastern Mediterranean

During 1987 an extraordinary positive change in the attitude of national authorities has been observed. Thirteen of the 23 countries requested WHO collaboration for the development of national programmes and all but one country have established national committees and identified national focal points on AIDS.

The regional plan for developing national capabilities in laboratory diagnosis is progressing as planned and at least two laboratory staff from each country have been trained in the laboratory diagnosis of AIDS.

The regional office is actively disseminating technical information on AIDS to national authorities and has responded positively to all requests made by national authorities to participate in various forums and scientific meetings on AIDS.

Western Pacific

A WHO/Government of Japan joint conference on integrated strategy for the control of AIDS and other human retroviral infections and hepatitis B was held in Tokyo, Japan 5-9 October 1987.

An intercountry training course on the laboratory diagnosis of HIV, HTLV-I and HBV infections will be held in Tonga from 2-6 November 1987. The services of four consultants are being provided for the course.

Surveillance, Forecasting and Impact Assessment

AIDS Surveillance

The collection, analysis and dissemination of data relevant to the control of AIDS, is a responsibility of the Surveillance, Forecasting and Impact Assessment Unit (SFI) of SPA.

As of 1 November 1987, 62 811 cases of AIDS had been officially reported to WHO from 127 countries throughout the world. The AIDS statistics are widely distributed and published in the *Weekly Epidemiological Record* and the journal *AIDS*. However, before any conclusions can be drawn from these data, the accuracy and completeness of reporting on AIDS needs to be evaluated.

AIDS cases reported to WHO as of 1 November 1987

Continent	Number of cases	Number of countries or territories reporting 1 or more cases
Africa	5 857	37
Americas	48 591	41
Asia	208	18
Europe	7 477	27
Oceania	678	4
Total	62 811	127

Lack of reporting and widespread under-recognition and under-diagnosis of AIDS means that the number of reported cases is a marked under-estimate of the true incidence of AIDS. WHO estimates that, as of late 1987, from 100 000 to 150 000 cases of AIDS have actually occurred worldwide. Even these estimates do not adequately describe the current clinical burden caused by HIV because AIDS cases represent only the end-stage of severe or irreversible damage due to this severe viral infection.

Since July 1987, SFI staff have visited the WHO Regional Offices in the Americas (Washington D.C.), South-East Asia (New Delhi), Europe (Copenhagen) and the Western Pacific (Manila) to review the status of national AIDS reporting.

Global AIDS Data Bank

Computer hardware and software to operate a WHO global AIDS data bank is expected to be operational in early 1988. Evaluation of the format, data bases and technology to be utilized is underway.

The global AIDS data bank will include AIDS cases, HIV-1 and HIV-2 seroprevalence data and additional information (economic, demographic, social, behavioural) for assessment and monitoring of global AIDS.

The definition of AIDS

The clinical and laboratory definition of AIDS has changed as documentation of the wide spectrum of clinical manifestations due to HIV has accumulated, and as specific laboratory tests to detect HIV infection and immune deficiency have been developed.

The initial definition of AIDS was developed by the Centers for Disease Control (CDC) of the US Public Health Service in 1982. This definition was subsequently accepted by WHO in 1985. However, use of this definition requires extensive laboratory (culture and/or histology) capability. Since most developing countries often lack adequate laboratory facilities, a definition of AIDS which would enable clinicians to arrive at this diagnosis with maximum precision was needed. As a result of a workshop held in Bangui, Central African Republic in 1985, a WHO clinical definition of AIDS in Africa was developed.

AIDS cases reported to WHO are accepted if they meet either the CDC/WHO or the WHO clinical definition.

In 1987, the CDC definition was revised to place greater emphasis on HIV infection status, to include additional indicator diseases and to accept presumptive diagnosis of some of the indicator diseases. Following review by the WHO Collaborating Centres and the regional offices, WHO has accepted the new definition. The impact of this new CDC/WHO definition on reported cases of AIDS to WHO is unclear, but is not expected to be large.

HIV serosurvey guidelines

To assess the extent of HIV infection requires standardized methods for measuring the prevalence of HIV infection in a specific geographical area or defined population.

In June 1987, SPA convened a small working group of medical epidemiologists, health survey specialists and biostatisticians to develop guidelines for HIV serosurveys. Draft guidelines have been disseminated for review and evaluation. These guidelines have been adapted for field evaluation and use in national serosurveys in Uganda and several other countries.

AIDS modelling

A working conference on AIDS modelling, co-sponsored by SPA and the US National Academy of Sciences, was held in Washington from 15-17 October 1987.

Over fifty participants contributed to the workshop on modelling the spread of HIV infection and the demographic impact of AIDS. SPA sponsored the participation of modellers and epidemiologists from Europe and Africa.

The workshop concluded that no single modelling approach could be selected due to the lack of data on sexual partner exchange rates, and the limited understanding of the natural history of HIV infection and prevalence and patterns of infection and disease.

Impact Assessment

Accurate AIDS data is critical as the base to assess the future impact of AIDS on health care systems, national economies and demographic patterns. A detailed listing of the potential impact of AIDS and HIV infection (i.e. medical, economic, social, demographic, etc) is being prepared by SPA staff. This list will be distributed to experts in various disciplines for their assistance in identifying studies which are underway to measure these impacts and to develop priorities for WHO support in these areas.

SPA and the World Bank are collaborating in studies of the economic impact of AIDS and on ways to improve planning for the expected caseload. Initial visits to develop the studies in three countries are scheduled for the last quarter of 1987. Preliminary estimates will be available in early 1988 of the direct medical costs and the indirect costs from the social and economic productivity lost due to AIDS. Issues to be addressed include: the projected effect of AIDS on the nation's supplies of essential drugs; the possibility that AIDS patients will displace from the health system patients whose problems could be cured using available therapies; and the threat posed to a country's development prospects by the years of lost productivity due to AIDS and other clinical conditions due to HIV. Discussions have also begun with the World Bank on a two-year research agenda concerning the economics and demography of AIDS.

'AIDS Scenarios' will be explored in a consultation being organized by the WHO European Office with the support of SPA. The social and economic implications of AIDS for Europe will be discussed during the meeting on 18 November 1987.

Biomedical Research

The Biomedical Research and Development Strategy

SPA has unique potential to provide a global forum for the exchange and validation of technical information and expertise, and can facilitate the development and improvement of diagnostic reagents, antiviral agents and vaccines, including their rapid but ethically and scientifically sound transfer to all countries in the world.

An Advisory Group on Biomedical Research on AIDS has been established to advise SPA on policies, objectives and strategies for biomedical research and to identify opportunities to promote research coordination. In the first phase (November 1987 - February 1988) the group will develop policies and general objectives. The second phase (February 1988 - May 1988) will develop detailed strategies and actions for implementation through extensive discussions with scientists, institutions, public interest groups and pharmaceutical companies throughout the world.

SPA believes the additional time taken in development of the biomedical research and development strategy will markedly improve the ultimate contribution of this unit. Nevertheless, the biomedical research and development unit of SPA is not awaiting full elaboration of the research strategy.

Coordination of Vaccine Development

The development of vaccines to prevent HIV infection represents a major scientific challenge, related both to the antigenic variability observed among different HIV strains and to our limited understanding of the immune response to HIV infection.

WHO has traditionally served a critical role in vaccine development by facilitating communication and collaboration and by organizing collaborative studies to standardize vaccines and methods for their evaluation.

In December 1986, SPA held an informal consultation in Geneva to discuss AIDS vaccine trials in human populations.

Further consultation took place in Munich in May 1987, to discuss recent advances in the development of vaccines against AIDS and to provide recommendations for the design of guidelines for clinical trials, including standardization of immunological and virological procedures for the evaluation of vaccines.

As part of the biomedical research and development strategy, SPA will continue to facilitate international cooperation in the development of HIV vaccines and in the design of clinical protocols for human trials, to ensure the quality of study design and ethical review.

Animal Models

The development and evaluation of antiviral agents and vaccines would be greatly facilitated if animal models for HIV infection and disease in humans could be established. Animal models presently available, such as chimpanzees and rhesus monkeys, are inadequate because these animals do not develop clinical manifestations of HIV infection. A meeting on possible new animal models for the assessment of antiviral agents and vaccines is being organized for early 1988.

AIDS reagent project

To facilitate the assessment and free exchange of reagents needed for biomedical research on HIV, SPA has created an AIDS reagent project. The project will coordinate collaborative research aimed at the standardization of reagents and laboratory techniques for viral characterization.

A Working Group met at the WHO Collaborating Centre on AIDS in London from 13-14 July 1987, to define the strategy for organization of a global bank of prototype virus strains and other important reagents, such as virus DNA clones, well characterized serological reagents, monoclonal antibodies and cell lines.

Viral strains have now been offered by several leading laboratories to be maintained in a small number of designated centres. These reagents will be made available through SPA.

A repository of virus isolates from different parts of the world is being established and will be used to monitor virus genetic variation of epidemiological importance.

Evaluation of diagnostic assays for HIV infection

A project for the evaluation of diagnostic assays for HIV infection has been established with the WHO Collaborating Centre on AIDS in Antwerp.

This project will permit a standardized comparison of screening and diagnostic methodologies not only for sensitivity and specificity, but also for critical operational characteristics.

Member States will then be provided with a matrix of information on the operation, performance, shelf-life, cost and other relevant characteristics of each test to facilitate comparisons and guide test kit selection.

New techniques for the laboratory diagnosis of HIV infection

The laboratory technology for diagnosis of HIV infection has evolved and is continuing to evolve. A consultation is being organized for early 1988, to exchange information and design collaborative studies for evaluation of new methodologies, such as direct HIV antigen detection, or the use of synthetic peptides for the detection of specific HIV antibodies. During this meeting, emphasis will also be placed on the identification of techniques adapted for use under field conditions.

Standardization of diagnostic techniques

New diagnostic methods are constantly being developed; standardized evaluation and use of these techniques is essential.

SPA is convening a consultation on standardization of diagnostic techniques at the WHO Collaborating Centre on AIDS in Stockholm, 7-8 December 1987. The international panel of geographically and temporally representative reference sera and further collaborative studies for the evaluation and standardization of diagnostic techniques will be discussed.

Standardization of Neutralization Tests

Several laboratories in different countries are involved in assays of neutralizing antibodies for HIV in connection with immunological and virological studies, including vaccine development. A wide variety of techniques and reagents are used; standardization is of great scientific importance.

A workshop is being organized for February 1988, to compare the sensitivities and specificities of the assays utilized by different groups and to consider the feasibility of establishing panels of reference reagents to standardize methods.

Working Group on HIV-Related Retroviruses

Following a meeting on "Newly Identified HIV-Related Retroviruses" (Geneva, February 1987) a Working Group was established to provide an international framework for the exchange of information and collaborative work on the characterization of these new retroviruses. This group, which included the leading AIDS virologists, first met at the WHO Collaborating Centre on AIDS in Madrid from 15-16 June 1987. An agreement was reached regarding criteria for the characterization of HIV-related retroviruses, as well as on a proposal for an internationally acceptable nomenclature of these viruses. This proposal has now received the endorsement of the International committee on Taxonomy of Viruses and was recently published (*AIDS* 1: 189-190, 1987).

HIV Infection and Tuberculosis

Recent data show that immunosuppression from HIV infection leads to a greater rate of progression to tuberculosis among persons infected with the tubercle bacillus. Following consultation with the relevant WHO units and the International Union Against Tuberculosis and Lung Disease (IUATLD), SPA reviewed this problem during the Joint Session of all Scientific Committees of the IUATLD held in Paris from 27 September to 2 October 1987.

SPA is organizing a collaborative working group to examine the interactions between HIV and tuberculosis. The group will develop a specific plan of study and will form practical linkages between AIDS control and tuberculosis control programmes at the national and international level.

Social and Behavioural Research

SPA convened a consultation on psychosocial research needs in HIV infection and AIDS held in Geneva from 25-28 May 1987. The twenty participants included epidemiologists, psychologists, anthropologists, social demographers and economists from 12 countries. Four major research areas were identified:

- high-risk behaviours and situations
- perception and knowledge, in relation to behaviour and risk of infection
- responses to epidemics - traditional and anticipated
- effect on family life and social structures

The Social and Behavioural Research Unit of SPA has established multidisciplinary technical working groups drawing on researchers from 33 countries to develop further a wide spectrum of research or training areas. A number of institutions are being assessed for designation as WHO collaborating centres in this area.

High-Risk behaviours

Sexual behaviour and HIV transmission

The technical working group first met at the University of Wales in Cardiff from 22-24 July 1987. At a second meeting, held in Geneva from 19-23 October 1987, a study design, protocol and research instrument for studying the frequency and distribution of high-risk sexual practices in different population groups was developed. Field testing will begin during January 1988 in five countries - Kenya, The Philippines, Tanzania, Uganda and the United States.

Prostitution and HIV transmission

A technical working group, established in August 1987, has prepared a draft study design, protocol and research instrument for studies of the practices and evaluation of protective measures by female prostitutes. These materials are under review by national researchers in Brazil, Germany, Mexico and The Philippines. SPA has established collaboration with other national and international research institutes working in this area and is planning a technical consultation in February 1988.

Intravenous drug use and HIV infection

A technical working group, organized in September 1987, has prepared a draft outline of research needs, including methodologies to assess intervention policies and strategies to reduce the risk of HIV infection among IV drug users. Two technical consultations are planned for 23-25 November 1987 and 18-20 January 1988 to evaluate intervention programmes for HIV risk reduction among IV drug users.

Other injecting practices and HIV infection

A technical working group has prepared an outline of studies on injecting practices which occur outside the formal health care system. The aim of the studies is to identify the prevalence of injecting behaviour, the groups involved, the sterilization procedures followed, and the perceived risk of infection (by both those giving and those receiving injections).

Social perceptions and explanatory models

Knowledge, attitudes and beliefs

A technical working group has prepared a draft study design, protocol and research instrument to study variations in knowledge of HIV infection, modes of transmission and attitudes to behaviour change. These materials are currently being pretested in Bulgaria, Iran, Kenya and Nigeria. To facilitate adaptation of the protocol by national researchers, the technical working group is preparing a manual which describes different survey methodologies.

Coping responses, including psychosocial and epidemiological implications

Counselling

In April 1987, SPA convened a consultation involving 13 specialists from eight countries to review counselling needs in different socio-cultural environments. The resulting guidelines on counselling are currently being reviewed by specialists in several countries.

The first of a series of Training Workshops on Counselling for HIV Infection and AIDS was held in Nairobi, Kenya from 29 September to 1 October 1987. This workshop was attended by 34 participants from 6 African countries. A training manual which was developed during this workshop is now being revised. A manual for training of trainers is also in preparation.

A two-week study tour of AIDS hospital facilities in the United Kingdom was organized for clinicians from Africa during July 1987. The participants were able to observe case-management and counselling activities.

HIV infection and families

Family Planning

A consultation to review the impact of HIV infection and the AIDS epidemic on family planning policies and programmes was held in Geneva on 18 May 1987. Senior staff from major international family planning organizations such as IPPF, UNFPA, Pathfinder, Family Health International, Columbia University and the Population Council, participated in discussions with staff from SPA, the Division of Family Health and the WHO Special Programme of Research, Development and Research Training in Human Reproduction (HRP). A report on AIDS and Family Planning has been prepared.

outlining the major concerns and areas for SPA interaction with family planning organizations. A plan of action for SPA will be developed by early 1988.

A meeting on contraceptive methods and HIV infection was organized by SPA and HRP, on 29-30 June 1987. The information available on the possible interactions between contraception and HIV infection was reviewed and a wide range of research needs were identified. Seventeen participants from nine countries attended the meeting representing a wide range of disciplines including epidemiology, immunology, sexually transmitted disease control, reproductive physiology, and gynaecology. The results of the meeting were published as a statement in the *Weekly Epidemiological Record* (No. 33 - 14 August 1987, 62, 244).

A technical meeting on HIV infection and maternal and child health is planned for February 1988. The purpose is to review this problem in different social, economic and health resource environments and identify areas where counselling and education on HIV prevention can be incorporated. Analysis of the activities and responsibilities of different health workers ("task analysis") will be undertaken to identify the type of guidelines and training required.

Breast milk/breast-feeding and HIV infection

In view of the importance of breast milk and breast-feeding for the health of infants and young children, and of the increasing prevalence of human immunodeficiency virus (HIV) infection in many parts of the world, a Consultation on Breast-feeding/Breast milk and HIV Infection was organized by SPA and the Division of Family Health in Geneva from 23-25 June 1987. Its purpose was to review current information on the potential for transmission of HIV in breast milk through breast-feeding and to identify further research needs in this area. Twenty-two participants from 15 countries attended the consultation representing the fields of epidemiology, immunology, virology, pediatrics and nutrition.

The meeting consensus included the following statements:

"Breast-feeding should continue to be promoted, supported and protected in both developing and developed countries."

"In individual situations where the mother is considered to be HIV-infected, and recognizing the difficulties inherent in assessing the infection status of the newborn, the known and potential benefits of breast-feeding should be compared to the theoretical, but apparently small, incremental risk to the infant of becoming infected through breast-feeding."

(See full consensus statement SPA/INF/87.8 which was published in the *Weekly Epidemiological Record* (No. 33 - 14 August 1987, 62, 245).)

A Technical Working Group has been set up to prepare short and long-term research strategies to examine the complex issue of perinatal transmission of HIV and the relationship of breast-feeding to infection in infancy.

Children and AIDS

A Technical Working Group, established in October 1987, is preparing guidelines on the psychosocial needs of children in relation to HIV. Activities are being closely coordinated with the U.S. Centers for Disease Control in Atlanta and the European Perinatal AIDS Study Group. A meeting on psychosocial needs of children in relation to HIV will be held in February 1988.

In collaboration with the Hôpital d'Enfants Malades in Paris, SPA will organize an international conference on children and AIDS to be held in November 1988.

Traditional and alternative care

A Technical Working Group was set up in September 1987 to define methods of mobilizing traditional and alternative health care systems in order to support national AIDS prevention and control strategies. A series of research needs and training opportunities have been identified and are currently being discussed with National AIDS Committees and research groups in several countries.

Health Promotion

A consultation on AIDS health promotion strategies was held in Geneva from 6-9 July 1987. Representatives from 21 countries presented their activities and plans and provided an updated global picture of active national AIDS information and education programmes. A draft SPA Instructional Guide for Health Promotion was revised as part of the workshop activities.

School education

A joint UNESCO/WHO meeting of educational specialists was held in Paris from 29 June - 1 July 1987. In collaboration with SPA, UNESCO will encourage AIDS education in schools and develop materials which can be integrated into existing programmes formal (school) and informal educational programmes.

AIDS information for Travellers

A brochure for travellers was published in September with endorsement by the World Tourism Organization (WTO). The brochure has been produced in English, French and Spanish and each brochure is 'camera-ready' copy. WTO is involving travel agents, airlines and tourism organizations to reprint and distribute the brochure.

AIDS: A worldwide effort will stop it — Brochure and posters

The poster and brochure, 'AIDS: A worldwide effort will stop it' were first released at the III International Conference on AIDS held in Washington, 1-5 June 1987. The brochure is available in English, French and Spanish; the poster in English, French, Spanish, Chinese, Russian and Arabic. These materials have been distributed to National AIDS Committees throughout the world.

Exhibition at the United Nations

An exhibition on AIDS was developed for showing at the United Nations General Assembly in New York in October 1987.

The exhibition included:

- Facts on AIDS
- The Global AIDS Plan
- Collage of worldwide health promotion material
- Video collage of selected video and TV spots on AIDS from around the world.
- SPA publications, posters and pamphlets on AIDS. Documents targeted for extensive distribution included the reports of meetings on the Criteria for HIV Screening Programmes (WHO/SPA/GLO/87.2) and the Consultation on International Travel and HIV Infection (WHO/SPA/GLO/87.1).

Upcoming activities:

- Publication of WHO Guidelines for Health Promotion. This three volume manual will include an Executive Summary (Volume I), a Technical Instructional Guide (Volume II), and a Folio (Volume III) of sample materials, themes and strategies for AIDS prevention. The guide is designed to assist decision-makers and educators in planning and managing communication strategies. It provides a work plan for defining audiences; identifying behavioural objectives; developing and pretesting messages; integrating communication channels; and monitoring impact. Regional training workshops in the use of the Instructional Guidelines are planned.
- Publication of an *AIDS Health Promotion Exchange Newsletter* on a quarterly basis. The newsletter will provide health promotion professionals with examples of innovative strategies and materials, and evaluations from health promotion programmes from around the world. The Royal Tropical Institute in the Netherlands will collaborate with SPA in the production of the newsletter.
- SPA will produce a four-page *AIDS Report* as an insert in a new AIDS newsletter published by the Appropriate Health Resources and Technologies Action Group (AHRTAG) in London. The insert, aimed at a broad range of health care professionals including nurses and clinical technicians, will feature summaries of technical consultations.
- SPA will collaborate with the Bureau of Hygiene and Tropical Medicine in London in the publication of a monthly *AIDS Technical Literature Update*, aimed at senior health care professionals without access to this information. The Update will provide extended summaries of key articles, abstracts and a select bibliography.
- A global network of Collaborating Centres for AIDS Information and Materials Exchange will be established.

WHO Collaborating Centres On AIDS

The following centres are already designated or are in the process of being designated:

Africa

Institut Pasteur, Boite Postale 923, Bangui, Central African Republic

Kenya Medical Research Institute, University of Nairobi, Nairobi, Kenya

Uganda Virus Research Institute, Entebbe, Uganda

Americas

Fundacao Oswaldo Cruz, Avenida Brasil 4365, Caixa Postal 926, 21040 Rio de Janeiro, Brazil

Laboratory Centre for Disease Control, Tunney's Pasture, Ottawa, Ontario, Canada K1A 0L2

AIDS Program, Center for Infectious Diseases, Centers for Disease Control, Atlanta, Georgia 30333, United States of America

Department of Cancer Biology, Harvard School of Public Health, 665 Huntington Avenue, Boston, Massachusetts 02115, United States of America

Center for Drugs and Biologics, Food and Drug Administration, 5600 Fishers Lane, Rockville, Maryland 20857, United States of America

National Institutes of Health, Building 1, Room 111, Bethesda, Maryland 20205, United States of America

South-East Asia

National Institute Virology, 20A Dr Ambedkar Road, 411001 Pune, India

Dept of Microbiology, Siriraj Hospital, Mahidol University, Bangkok, Thailand

Europe

Institut de Médecine Tropicale, "Prince Léopold", Nationalestraat 155, B-2000 Antwerp, Belgium

National Board of Health, Coordinator, Collaborating Centres on AIDS of Denmark, Copenhagen, Denmark

WHO Collaborating Centre on Oral Manifestations of HIV, Department of Oral Pathology, The Royal Dental College, 3C, Blegdamsvej, DK-2200 Copenhagen N, Denmark

Centro Nacional de Microbiología, Virología e Inmunología Sanitarias, Majadahonda, Madrid, Spain

Institut de Médecine et d'Epidémiologie Tropicales, Hôpital Claude Bernard, 10 avenue de la Porte d'Aubervilliers, 75944 Paris Cedex 19, France

Unité d'Oncologie Virale, Institut Pasteur, 28 rue du Docteur Roux, F-75724 Paris Cedex 15, France

National Reference Centre for AIDS, Athens School of Hygiene, Athens, Greece

National Institute of Hygiene, Gyali ut. 2-6, 1097 Budapest, Hungary

Dept of Virology, Istituto Superiore di Sanità, Laboratorio di Virologia, Viale Regina Elena 299, 00161 Rome-Nomentano, Italy

Central Public Health Laboratory, 61 Colindale Avenue, London NW9 5HT, United Kingdom

National Institute for Biological Standards and Control, Hampstead, London NW3 6RB, United Kingdom

Collaborating Centres on AIDS of the Federal Republic of Germany, Coordinator, Dept of Hygiene and Medical Microbiology, Max von Pettenkofer Institute, Pettenkoferstrasse 9A, 8000 Munich 2, Federal Republic of Germany

National Bacteriological Laboratory, 10521 Stockholm, Sweden

D.I. Ivanovsky Institute of Virology, 6, Gamaleya Street, 123098 Moscow, Union of Soviet Socialist Republics

Eastern Mediterranean

US Naval Medical Research Unit, NAMRU-3, c/o American Embassy, Cairo, Egypt

National Institute of Health, Islamabad, Pakistan

Faculty of Medicine, Kuwait University, Kuwait

Western Pacific

National AIDS Reference Laboratory, Fairfield Hospital, Yarra Bend Road, Fairfield, Victoria 3078, Australia

Institute of Virus Research, Kyoto University, Sakyo-ku, Kyoto 606, Japan

Annex 1**World Health Assembly** WHA40.26 15 May 1987**Global Strategy for the Prevention and Control of AIDS**

The Fortieth World Health Assembly,

Having considered the report of the Director-General on WHO's Special Programme on AIDS;¹

Deeply concerned that this disease caused by one or more naturally occurring retro-viruses of undetermined geographical origin has assumed pandemic proportions affecting all regions of the world and which represents a threat to the attainment of health for all;

Realizing that the transmission of AIDS can be prevented, that information is an essential element in all control of AIDS, and that every individual has a responsibility;

Reiterating that information and education on the modes of transmission as well as the assurance and use of safe blood and blood products, and sterile practices in invasive procedures, are still the only measures available that can limit the further spread of AIDS;

Convinced of the crucial importance of countries closely integrating their programme for the prevention and control of AIDS within their health systems based on primary health care;

Impressed by the accelerated response of WHO to this emergency during the past year;

Noting with satisfaction that WHO has invested funds from its regular 1986-1987 budget to deal with this serious public health problem despite current financial constraints;

Grateful to all those whose generous extrabudgetary contributions have made it possible to give the required momentum to WHO's efforts to combat AIDS;

Stressing the need for substantial additional voluntary contributions to permit WHO to fulfil its international directing and coordinating role in this field;

Emphasizing that all contributing countries are protecting the health of their own people no less than that of others, since AIDS knows no geographical boundaries;

Realizing that the worldwide emergency created by AIDS will require urgent and vigorous globally directed action in the development of epidemiological surveillance, the intensification of research in prevention, control, diagnosis and treatment including social science research, the training of national health workers and other relevant areas of prevention, control and research;

Recognizing that due to the relatively long incubation period of the virus and the large number of people already infected with it, the worldwide number of AIDS cases will continue to rise in the next few years irrespective of public health strategies to prevent viral transmission;

1. **Confirms** that WHO should continue to fulfil its role of directing and coordinating the global, urgent and energetic fight against AIDS;
2. **Endorses** the establishment of a Special Programme on AIDS and stresses its high priority;
3. **Further endorses** the global strategy and programme structure prepared by WHO to combat AIDS;

¹ A40.5

4. Urges Member States:

- (1) to establish or strengthen effective programmes to combat AIDS in line with the above-mentioned global strategy and recommendations of the Third Meeting of Participating Parties;¹ and to ensure that control is integrated into the existing system based on primary health care, and is based on effective educational and preventive measures to enable each person to protect himself/herself from the disease;
 - (2) to cooperate fully with one another in facing this worldwide emergency within the context of the policy of technical cooperation among countries through the adoption of compatible programmes and transfer of appropriate technology;
 - (3) to share in full openness with WHO and with other Member States all relevant and reliable information on AIDS and related infections;
5. Urges Member States to make voluntary contributions in cash and kind for the implementation of the global strategy;
6. Appeals to bilateral and multilateral agencies, as well as nongovernmental and voluntary organizations, to support the worldwide struggle against AIDS in conformity with WHO's global strategy;
7. Requests the regional committees:
- (1) to keep the situation concerning AIDS in the regions under constant review;
 - (2) to ensure that regional resources to combat AIDS are used in conformity with the global AIDS strategy; and
 - (3) to report annually to the Director-General on the situation in the region;
8. Requests the Executive Board to review yearly until further notice the global epidemiological situation concerning AIDS and progress in implementing WHO's global strategy to combat it;
9. Requests the Director-General:
- (1) to ensure that the global strategy to combat AIDS is effectively implemented by all levels of the Organization - country, regional and global - with the aim of containing, progressively reducing and eventually stopping the spread of the infection;
 - (2) to assert WHO's international directing and coordinating role in support of national AIDS programmes;
 - (3) to support national AIDS prevention and control programmes in due balance with other health programmes by ensuring adequate coordination and cooperation of the governments concerned, WHO and other external partners;
 - (4) to continue to develop effective strategies to prevent the transmission of AIDS, including social and behavioural research and the advocacy of the role of women in preventing transmission;
 - (5) to reinforce the Organization's support to Member States in designing or strengthening, implementing, monitoring and evaluating national programmes for AIDS prevention and control;
 - (6) to issue guidance on the prevention and control of AIDS on a continuing basis as new information comes to light and the Special Programme evolves;
 - (7) to continue to seek extrabudgetary funds to implement the global AIDS strategy;
 - (8) to establish a Special Account for AIDS in the Voluntary Fund for Health Promotion; and
 - (9) to report on the matter to the Executive Board and to the World Health Assembly annually.

Twelfth plenary meeting 15 May 1987 A40/VR/12

Annex 2**Economic and Social Council of
the United Nations**

Text of Resolution 1987/75 of the 35th Plenary Session
8 July 1987

Prevention and control of AIDS**The Economic and Social Council,**

Having considered World Health Assembly resolution WHA40.26 of 15 May 1987 on the global strategy for the prevention and control of acquired immunodeficiency syndrome (AIDS),

Deeply concerned to learn that this disease has assumed pandemic proportions affecting all regions and that it represents a serious threat to the attainment of health for all by the year 2000 and to social and economic development in general,

Considering that the international community should do the utmost to prevent the further spread of AIDS, bearing in mind that information is an essential element in the control of AIDS and that every individual has a responsibility,

Realizing that the worldwide emergency created by AIDS will require urgent and vigorous globally directed action in prevention, control and research,

1. Draws the attention of the General Assembly to World Health Assembly resolution WHA40.26, by which the World Health Assembly endorsed the global strategy for the prevention and control of AIDS prepared by the World Health Organization;
2. Expresses its appreciation to the World Health Organization for taking the lead in mobilizing the international community to combat the disease;
3. Calls upon all States to take active measures to prevent and control AIDS in line with the global strategy;
4. Urges all appropriate organizations of the United Nations system, including the specialized agencies as well as bilateral and multilateral agencies and nongovernmental and voluntary organizations, to support the worldwide struggle against AIDS in close cooperation with the World Health Organization in its role of directing and coordinating the urgent fight against AIDS and in conformity with the global strategy.

Annex 3

United Nations General Assembly

Text of Resolution A/42/8 of the 42nd session of the
United Nations General Assembly,
26 October 1987

**Prevention and control of acquired immune deficiency
syndrome (AIDS)**

The General Assembly,

Deeply concerned that acquired immune deficiency syndrome (AIDS), caused by one or more naturally occurring retroviruses of undetermined origin, has assumed pandemic proportions affecting all regions of the world and represents a threat to the attainment of health for all,

Having considered World Health Assembly resolution WHA40.26 of 15 May 1987 on the Global Strategy for the prevention and control of AIDS and Economic and Social Council resolution 1987/75 of 8 July 1987 on prevention and control of AIDS,

Recognizing the established leadership and the essential global directing and coordinating role of the World Health Organization in AIDS prevention, control and education, and related research and public information and, in this context, the vital importance of the World Health Organization Special Programme on AIDS,

1. Commends the World Health Organization for its efforts towards global AIDS prevention and control and, in particular, for its support for national AIDS programmes and regional activities, including the meeting of Ministers of Asian and Pacific Governments at Sydney, and the forthcoming World Summit of Ministers of Health on Programmes for AIDS Prevention to be held in London;
2. Confirms that the World Health Organization should continue to direct and coordinate the urgent global battle against AIDS;
3. Commends those Governments which have initiated action to establish national programmes for the prevention and control of AIDS in line with the Global Strategy of the World Health Organization, and urges other Governments to take similar action;
4. Calls upon all States, in addressing the AIDS problem, to take into account the legitimate concerns of other countries and the interests of inter-State relations;
5. Invites the World Health Organization to facilitate the exchange of information on and promotion of national and international research for the prevention and control of AIDS through the further development of Collaborating Centres of the World Health Organization and similar existing mechanisms;
6. Requests the Secretary-General, in view of all aspects of the problem, to ensure, in close cooperation with the Director-General of the World Health Organization and through the appropriate existing mechanisms, a coordinated response by the United Nations system to the AIDS pandemic, and urges all appropriate organizations of the United Nations system, including the specialized agencies, bilateral and multilateral agencies and non-government and voluntary organizations, in conformity with the Global Strategy, to support the worldwide struggle against AIDS;
7. Invites the Director-General of the World Health Organization to report to the General Assembly at its forty-third session, through the Economic and Social Council, on new developments in the global AIDS pandemic, and requests the Economic and Social Council to consider the report in accordance with its mandate.

Annex 4**Note verbale from the Director-General, WHO**

(Ref.: C.L.30.1987)

The Director-General of the World Health Organization presents his compliments and, further to his communication of 30 June 1987 concerning resolution WHA40.26, which requested him *inter alia* to issue guidance on the prevention and control of AIDS on a continuing basis, has the honour to draw attention to recent concerns about parenteral transmission of human immunodeficiency virus (HIV) which make it timely to review existing guidelines for the use of injections and other skin-piercing procedures.

As stated in the preamble of resolution WHO40.26, "information and education on the modes of transmission as well as the assurance and use of safe blood and blood products, and sterile practices in invasive procedures, are still the only measures available that can limit the further spread of AIDS". The invasive procedures referred to include injections and other skin-piercing procedures, such as acupuncture, tattooing, scarification and ear piercing.

Injections and other procedures which are used to pierce the skin or mucous membranes for preventive, diagnostic or therapeutic purposes play an important role in both traditional and modern care. While injections and other skin-piercing procedures provide the only method for certain preventive, diagnostic or therapeutic interventions (e.g. most immunizations, thick blood smears for malaria diagnosis, intravenous or intramuscular administration of medication), in other situations alternative procedures are available (e.g. oral administration of medications).

Injections and other skin-piercing procedures can transmit infection if a reusable needle or other instrument is not sterilized properly. Bacteria, viruses, parasites and fungi may be transmitted between individuals in this manner. For example, such transmission has been documented with the hepatitis B virus. The risk of similar transmission of HIV also exists, although the level of risk appears lower than with hepatitis B virus.

The Director-General wishes therefore to issue the following guidance regarding the prevention of transmission of infection from injections and other skin-piercing procedures:

1. In order to minimize such transmission of infective agents, *it is important to restrict injections and other skin-piercing procedures to situations in which the indications are clearly and appropriately defined*. These procedures should only be used after consideration of the risks and benefits of available options so as to avoid their over-use and over-prescription. *Where an appropriate and acceptable alternative is available, it should be used.*
2. To avoid person to person transmission of microbial agents, *single use (disposable) instruments should be used only once. They should then be destroyed under the careful supervision of appropriate health care staff, to prevent re-use. Multiple use (reusable) instruments should always be washed and appropriately sterilized (or disinfected) according to existing guidelines (Weekly Epidemiological Record, 1987; 9:53-4).*

If these procedures are always used and applied properly, the risk for transmission of infections, including HIV, through injections and other skin-piercing procedures can be eliminated.

Geneva, 17 September 1987

STATEMENT

J. JARRETT CLINTON, M.D.

DEPUTY ASSISTANT SECRETARY OF DEFENSE
(PROFESSIONAL AFFAIRS & QUALITY ASSURANCE)

HUMAN IMMUNODEFICIENCY VIRUS

before the

Senate Foreign Relations Committee
United States Senate
100th Congress

December 9, 1987
2:30 p.m.

Not for Publication
Until Released by the Senate Committee on Foreign Relations
United States Senate

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

It is my pleasure to appear before you today to discuss the Department of Defense policy on Human Immunodeficiency Virus (HIV). I will summarize current DoD policy and discuss the implementation of programs in a number of areas.

1. HIV Testing of Military Recruit Applicants

Since October 1985 individuals with serologic evidence of HIV infection (Food and Drug Administration approved enzyme immunoassay (EIA) serologic test and, if positive, a positive immunoelectrophoresis test (Western blot)), have not been eligible for appointment or enlistment for military service. For other categories of personnel (ROTC, Service Academy, Reserve Components), those individuals with serologic evidence of HIV infection who are required to meet accession medical fitness standards in order to be appointed to a new component are not eligible to do so.

The rationale for excluding HIV positive individuals from entering the military is that the condition existed prior to appointment or enlistment; the Department avoids potential medical costs and the possibility that the individual will not complete his or her service commitment; clinical evidence suggests that individuals with serologic evidence of HIV infection may suffer adverse and potentially life-threatening reactions to some live virus immunizations at basic training; an individual with serologic evidence of HIV infection is not able to participate in battlefield blood donor activities or other blood donation programs; and, there is no way to differentiate between individuals with serologic evidence of HIV infection who will progress to clinical disease and those who will remain healthy.

During the period October 1985 to September 1987, the Department has screened approximately 1.2 million civilian recruit applicants. The overall antibody positive prevalence rate is 1.5 per thousand tested. Statistical synopses of this information are provided wide dissemination through the U.S. Public Health Service's Morbidity and Mortality Weekly Report. State specific information is provided quarterly to each state health officer by the U.S. Public Health Service's Centers for Disease Control.

HIV antibody positivity per 1000 persons (for October 1985 through September 1987) varied by sex, age, race, and ethnicity:

- o 1.6 for males and 0.7 for females.
- o 0.8 for white males and 0.3 for white females
- o 4.6 for black males and 1.6 for black females
- o 2.4 for Hispanic males and 0.5 for Hispanic females.

2. HIV Testing of Active Duty Personnel

Active duty and reserve component military personnel are screened for serologic evidence of HIV infection using the same

tests and standards used for recruit applicants. Initial testing and periodic retesting is accomplished in the following priority order: military personnel serving in, subject to deployment to, or pending assignment to overseas stations; select groups in the medical setting such as individuals presenting to sexually transmitted disease clinics, and all remaining military personnel in conjunction with routinely scheduled periodic physical examinations.

The rationale for HIV testing of military personnel includes exposure to live virus vaccines, potential exposure to severe infectious diseases, and potential requirements of a buddy-based blood bank during contingencies.

The distribution of AIDS and ARC cases diagnosed in active duty personnel for 1982-1985 is:

YEAR	AIDS	AIDS RELATED COMPLEX (ARC)
1982	1	0
1983	17	7
1984	28	17
1985	70	55

The active force testing program began in late 1985. To date, approximately 2.1 million active force personnel have been tested. The overall HIV antibody positivity rate among active duty personnel is 1.6 per thousand individuals screened.

Each individual confirmed to have serologic evidence of HIV infection receives extensive evaluation, psychological support, and treatment if necessary at select Service medical treatment facilities within the United States. Each patient's stage of infection is categorized in accordance with a clinical research protocol initially developed by Walter Reed Army Institute of Research.

3. Disease Surveillance

For all civilian beneficiaries of the military health care system, a voluntary HIV serologic screening program is provided in accordance with published recommendations of the U.S. Public Health Service and as indicated by standard medical practice. For example, HIV serologic screening can be offered to beneficiaries presenting at sexually transmitted disease clinics, alcohol and drug rehabilitation units, and prenatal clinics.

In addition, health care beneficiaries concerned about whether they have been exposed to HIV are encouraged to consult with local DoD medical personnel. As is the procedure for other problems, such as other sexually transmitted diseases, the beneficiary may

obtain an appointment and discuss his or her concerns directly with the physician. The appropriate supporting tests, including laboratory evaluation, are determined by the physician.

Mandatory screening of civilian employees or dependents for serologic evidence of HIV infection prior to military sponsorship overseas is not authorized presently. Policies involving screening of civilians as an integral part of a complete medical examination prior to military sponsorship overseas will be developed, as necessary, by the Assistant Secretary of Defense (Force Management and Personnel) in consultation with the Assistant Secretary of Defense (Health Affairs) and the General Counsel. Guidelines will also be developed for the administration of family members or civilian employees proposed for military sponsorship or under military sponsorship overseas who develop clinical manifestations of HIV infection or serologic evidence of HIV infection.

DoD does not require centralized reporting of the voluntary HIV testing of civilian beneficiaries.

The Office of the Assistant Secretary of Defense (Force Management and Personnel) has developed for distribution to all DoD employees a draft pamphlet on HIV and AIDS in the workplace.

4. Health Education

The Assistant Secretary of Defense (Health Affairs) is responsible for coordinating the overall policy guidance for the HIV/AIDS education and information program. The military medical departments are responsible for ensuring that appropriate preventive medicine counseling is given to individual patients and for providing public health education materials to its beneficiary population.

The DoD HIV/AIDS Information and Education effort is well established. A Departmental coordinating committee provides a forum for information sharing among the Services, reviews and evaluates print and audiovisual materials for use within the Department, recommends materials for joint-interest purchase, and coordinates requests for materials from national and voluntary organizations. The Department has centrally funded \$153,000 for publications and approximately \$71,500 for films. The Services have spent approximately \$137,800 for educational films. In addition, the Department has made extensive use of materials available from other federal agencies and voluntary organizations at no cost to DoD. Several pamphlets and films have been obtained from the Public Health Service. Public Service television spots have also been reproduced for use overseas. The individual Services have developed briefing packets and purchased materials for specific audiences.

A DoD information and education program framework serves to integrate the HIV information and education objectives and activities. The program focuses on prevention measures in general, activities appropriate to school age beneficiaries, efforts directed toward those already HIV antibody positive or at high risk of infection, and information for health care workers.

5. Medical Assessment and Preventive Medicine Intervention

The medical assessment of each individual with serologic evidence of HIV infection seen at a military medical treatment facility includes an epidemiological assessment of the potential transmission of HIV to other persons at risk of infection including sexual and other intimate contacts, including the immediate family of the patient. This information is vital to provide appropriate preventive medicine counseling and to the continued development of scientifically based information regarding the natural history and transmission patterns of HIV. Therefore, the occurrence of HIV infection or serologic evidence of HIV infection is not used as a basis for any disciplinary action against an individual.

Each military medical service conducts an ongoing clinical evaluation of each active duty military member with serologic evidence of HIV infection at least annually. Additionally, each military medical service conducts longitudinal clinical evaluations of active duty military personnel with serologic evidence of HIV infection and prepares internal reports to facilitate timely review and reassessment of current policy guidelines.

All military medical treatment organizations are required to notify the cognizant military health authority whenever a diagnosis of HIV infection is made or whenever laboratory examination of any specimen yields evidence indicative of infection with HIV. Upon notification, the cognizant military health authority undertakes preventive medicine intervention including counseling of the individual and others at risk of infection regarding transmission of the virus, coordination with military and civilian blood bank organizations to trace back possible exposure through blood transfusion or donation of infected blood, and referral of appropriate case contact information to the cognizant military or civilian health authority. All individuals with serologic evidence of HIV infection who are military health care beneficiaries are counseled by a physician or designated health care provider regarding the significance of a positive antibody test. They are advised as to the mode of transmission of this virus, the appropriate precautions and personal hygiene measures required to minimize transmission through sexual activities and/or intimate contact with blood or blood products, and of the need to advise any past sexual partners of their infection. Women are advised of the risk of perinatal transmission during past, current and future

pregnancies. The beneficiary is informed that he or she is ineligible to donate blood and will be placed on a permanent donor deferral list.

Epidemiological investigation attempts to determine potential contacts of the patient. The patient is informed of the importance of case contact notification to interrupt disease transmission and is informed that contacts will be advised of their potential exposure to HIV. Those individuals determined to be at risk who are identified and who are eligible for health care in the military medical system are notified. Military members identified to be at risk are counseled and tested for serologic evidence of HIV infection. Other beneficiaries, such as retirees and family members identified to be at risk, are informed of their risk and offered serologic testing, clinical evaluation, and counseling. The names of individuals identified to be at risk who are not eligible for military health care are provided to local civilian health authorities unless prohibited by the appropriate state or host nation civilian health authority. Anonymity of the HIV index case is maintained unless reporting is required by the health jurisdiction. Communicable disease reporting procedures of civil authorities are followed to the extent consistent with DoD guidance through liaison between the military public health jurisdiction and the appropriate local, state, territorial, federal, or host-nation health jurisdiction.

Military personnel with serologic evidence of HIV infection are assigned only within the United States. Additionally, the Secretaries of the Military Departments, in order to protect the health and safety of military personnel with serologic evidence of HIV infection and of other military personnel, may limit assignment of such individuals with respect to the nature and location of the duties performed in accordance with operational requirements.

6. Retention and Separation

Active duty personnel with serologic evidence of HIV infection are referred for a medical evaluation for documentation of fitness for continued service in the same manner as personnel with other progressive illnesses. Evaluation is conducted in accordance with a standardized clinical protocol. Individuals with serologic evidence of HIV infection who show no evidence of clinical illness or other indication of immunologic or neurologic impairment related to HIV infection are not separated solely on the basis of serologic evidence of HIV infection.

Reserve component members with serologic evidence of HIV infection are ineligible for extended active duty (duty for a period of more than 30 days) except under conditions of mobilization. Reserve component members who are not on extended active duty (duty for a period of more than 30 days) or who are not on extended full-time National Guard duty and who show serologic evidence of HIV infection are transferred to the Standby

Reserve only if they cannot be utilized in the Selected Reserve. Military personnel who are infected with HIV and who are determined to be unfit for further duty are given a medical retirement or are medically separated.

Military personnel with serologic evidence of HIV infection who are found not to have complied with lawfully ordered preventive medicine procedures for individual patients are subject to appropriate administrative and disciplinary action which may include separation.

7. Safety of the Blood Supply

Armed Services Blood Program Office policies, Food and Drug Administration guidelines, and accreditation requirements of the American Association of Blood Banks are followed by the Military Departments and Unified and Specified Commands and by civilian blood agencies collecting blood on military installations.

The Armed Forces Blood Program has screened approximately 306,000 units of blood since 1985. The Western blot confirmed antibody positive rate for the most recently reported quarter, January - March 1987, was 0.3 per 1000 units tested. This rate is of the same magnitude as that reported by the national civilian blood collection agencies.

8. Limitations on the Use of Interview Information

Information obtained from a service member during or as a result of an epidemiologic assessment interview may not be used against the service member in a court martial, nonjudicial punishment, involuntary separation (other than for medical reasons), administrative or punitive reduction in grade; denial of promotion, an unfavorable entry in a personnel record; a bar to reenlistment, or any other action considered by the Service Secretary to be an adverse personnel action.

Results obtained from laboratory tests for HIV may not be used as the basis for separation of the service member except for a separation based upon physical disability or as specifically authorized by DoD policy. (Reference Public Law 99-661, November 14, 1986, Section 705(c)).

The limitations on use of information obtained from a member do not apply to: the introduction of evidence for impeachment or rebuttal purposes in any proceeding in which the evidence of drug abuse or relevant sexual activity (or lack thereof) has been first introduced by the service member or to disciplinary or other action based on independently derived evidence; or, nonadverse personnel actions such as reassignment, disqualification (temporary or permanent) from a personnel reliability program, denial, suspension, or revocation of a security clearance, suspension or termination of access to classified information; or,

removal (temporary or permanent) from flight status or other duties requiring a high degree of stability or alertness such as explosive ordnance disposal or deep-sea diving.

9. Research

The Congressional Conference Report on the FY-86 Continuing Resolution (H.R. No. 99-450) directed that DoD establish an AIDS research and development program under the management of the Assistant Secretary of Defense (Health Affairs). Congress directed that the program be coordinated with similar efforts at the National Institutes of Health. The research efforts will explore improved methods of detecting early HIV infections, focus on the early disease patterns, explore risk factors in the military population, and take advantage of unique military capabilities and population to test and evaluate candidate drugs and vaccines for use in military applications and in support of the national effort. The DoD HIV/AIDS research program focuses on the epidemiology and natural history of HIV infection in military and military associated populations, and on studies of the immune response to HIV infection, including the increased risk in the military environment.

The DoD research efforts are now well established. The Army, as lead agency for infectious disease research within DoD, has the responsibility for administering the program. DoD received \$37.8M in FY 86; \$21.8M was appropriated for FY 87. The President's Budget contains \$5M for FY 88 and \$12M for FY 89. One third of the approved proposals are in Federal laboratories (Army, Navy, Air Force, Uniformed Services University of Health Sciences, Armed Forces Institute of Pathology, National Institutes of Health, Centers for Disease Control, and Veterans Administration). Extensive collaboration with the Public Health Service and other Federal agencies has been maintained.

DoD HIV/AIDS research efforts have already established a noteworthy record. DoD researchers participated with the National Institutes of Health in the earliest efforts to isolate the virus, contributed significantly to the issues surrounding heterosexual spread of the infection, established the first staging system for classification of the disease, successfully implemented the quality control system for the first large-scale HIV testing program, successfully tested a genetically engineered HIV protein for an improved diagnostic assay, and demonstrated that the blood virus load increases as the stage of the illness increases.

In conclusion, the Department of Defense is taking aggressive action to block the spread of HIV infection. Education, testing, counseling, treatment and research are all essential elements of our program.

Statement of

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 on
 A.I.D. and the Global AIDS Epidemic

before

Committee on Foreign Relations
 U.S. Senate
 December 9, 1987

As of November 11, 1987, the World Health Organization (WHO) estimates there have been over 64,000 cases of acquired immune deficiency syndrome (AIDS) worldwide. As many as 5-10 million people may presently be infected with the Human Immunodeficiency Virus (HIV).

If nothing is done to control the epidemic, WHO predicts that the number of infected persons may increase up to ten-fold within the next 5 years. At present, the probability that HIV-infected people will subsequently develop AIDS appears to be 25 to 50 percent, but this figure grows from month to month. With no cure or vaccine in sight, the situation for many developing countries is grim. Developing countries, with their limited financial and institutional resources, need help urgently.

THE AIDS PANDEMIC

AFRICA: In Africa, particularly Central Africa, infection appears to have spread widely, primarily through heterosexual contact. In at least eight capitals -- Bangui, Brazzaville, Bujumbura, Dar es Salaam, Kampala, Kigali, Kinshasa, and Lusaka -- data from samples of urban adults indicate that over 5 percent of these populations have been infected with HIV. Most governments have formed national AIDS committees and are preparing national plans for AIDS prevention and control.

LATIN AMERICA AND THE CARIBBEAN: In the Caribbean, infection has also spread widely, initially through homosexual contact, more recently through heterosexual contact. In Port-au-Prince, Haiti, like much of Central Africa, over 5 percent of pregnant women are infected with

the virus. In most of South America, infection is still largely confined to homosexual and bisexual males and intravenous drug users. In most South American cities, less than 1 percent of the adult population is infected. There has been a recent marked increase in governmental awareness of the AIDS pandemic in both the Caribbean and Latin America, accompanied by formation of national AIDS committees and preparation of national plans.

ASIA AND THE NEAR EAST: In Asia, infection is apparently quite limited, even among high-risk populations such as prostitutes. The presence of these high-risk populations, with their extensive international contacts, however, suggests a great potential for rapid HIV spread within urban areas in Asia. In general, Asian governments view AIDS as a less urgent problem and have moved more slowly to undertake substantive AIDS prevention and control efforts.

THE THREAT TO DEVELOPMENT: The modes of transmission and natural history of HIV infection make AIDS a major threat to development. HIV is contracted from blood, semen, or vaginal fluids during unprotected sexual intercourse, or from unscreened blood transfusions, contaminated skin-piercing equipment, or mother to child contact during the perinatal period. Its epidemiology is dependent on the most sensitive and culturally-specific human behaviors.

As a sexually-transmitted disease, AIDS principally attacks young adults, who are among the most productive members of society, and further selects urban young adults, who are often the best-educated members of society. It also threatens the survival of children, directly, through HIV transmission from mother to infant, and indirectly, through the illness and death of their parents. Current data indicate that 50% of children born to HIV-infected mothers will have HIV.

The development impact of the AIDS pandemic extends to all sectors. Economic output may decrease as increasing numbers of productive young adults become sick and die with AIDS and ARC. Health care resources will be further stretched by the increasing numbers of patients.

THE WORLD HEALTH ORGANIZATION RESPONSE

This threat to health and development has been recognized by the world community. In February 1987, the World Health Organization undertook a worldwide effort to control the spread of HIV -- the World Health Organization Special Programme on AIDS (WHO/SPA).

In one year the Special Programme on AIDS has marshalled the support of all nations, raised funds, designed and is currently implementing a global AIDS strategy. This strategy requires that a strong AIDS program be developed in every country. Already, national AIDS committees have been developed in over 100 countries. Using WHO guidelines, 50 countries have prepared written plans for national AIDS prevention and control. Five countries -- Uganda, Kenya, Tanzania, Rwanda, and Ethiopia -- have completed 3-5 year plans. By the end of 1988, WHO/SPA expects to have AIDS medium-term plans underway in 125 countries.

The leadership of WHO has had the support and earned the praise of all donors. The Venice economic summit made special note of WHO's efforts as did the United Nations General Assembly this Fall.

THE AIDS POLICY OF THE AGENCY FOR INTERNATIONAL DEVELOPMENT

The United States fully and actively supports the World Health Organization Special Programme on AIDS (WHO/SPA). This is a cornerstone of our assistance policy. In FY 1986, A.I.D. was the first donor to provide financial support to the WHO/SPA with a donation of \$1 million to the WHO/SPA and \$1 million to the WHO regional office in Africa. In FY 1987, A.I.D. made a \$5 million contribution to WHO/SPA. The U.S. remains the largest contributor to the WHO/SPA.

Within the framework of the WHO/SPA, the focus of A.I.D.'s policy is to arrest the spread of HIV infection to those who are presently uninfected. Tragically, with the drug, vaccine, and financial situation as it is, we can do little for the people who are now HIV-infected. But, we must work quickly to limit the further spread of infection, so that the number of infected does not grow even more rapidly.

The basis for our AIDS program is outlined in the A.I.D. AIDS policy which is appended to this statement. The key components of the AIDS program at A.I.D. are:

- prevention of HIV transmission in all U.S.A.I.D.-supported health, population, and nutrition programs;
- surveillance to monitor the spread of HIV;
- public education aimed at increasing the level of AIDS knowledge, promoting behavioral change, and decreasing fear and ignorance about AIDS;
- prevention of HIV transmission occurring via blood transfusion;

-- condom procurement and distribution;

-- limited intervention-oriented and operational research in order to improve program effectiveness and adapt programs to particular settings.

In view of the fiscal constraints in which we all operate, we plan to prioritize our efforts. We will concentrate our efforts in those countries: where there is the best opportunity to control the spread of the infection; and where the threat of AIDS is recognized and there is a commitment to addressing it.

For example, it would be prohibitively expensive to screen all the blood donations in the developing world for HIV. Instead, blood transfusion screening will be carried out with a targeted approach. Screening will be directed at HIV-1, which is the only human retrovirus known to have a clear role in causing AIDS. Screening will take place where there is a high prevalence of HIV infection, and where there are facilities that use a high volume of blood transfusions.

A.I.D.'s policy consciously takes into account what others are doing and their respective strengths and resources. For example, A.I.D. does not intend to carry out any basic research and plans only limited applied research. Nor do we intend to become involved in either AIDS treatment or health care. We work closely with other Federal agencies and bodies, such as the Department of State, the Centers for Disease Control, the National Institutes of Health, and the Interagency Coordinating Council, in order to ensure that we build on their strengths, and do not duplicate their efforts.

THE PROGRAM FOR FY 1987 AND FY 1988

In FY 1987, the total A.I.D. funding for AIDS in developing countries was \$17.2 million. Of this, \$5 million was provided for the WHO/SPA, and the balance was used for A.I.D. bilateral and regional programs. Geographically, the spending pattern was: \$4.8 million for 15 countries in Africa; \$300,000 for 3 countries in Asia and the Near East; \$2.4 million for 12 countries in Latin American and the Caribbean; and, \$4.7 million for regional and worldwide programs.

In FY 1988 the current action of the Congress would suggest an appropriation for AIDS of \$30 million, with \$15 million to be provided to the World Health Organization. We expect the distribution of funds in FY 1988 to be similar to that of FY 1987.

To implement our AIDS program, we have developed a worldwide AIDS project with three components:

1) AIDSTECH (AIDS Technical Support Project: Technical Assistance Component): AIDSTECH, a technical assistance activity, is global in scope and will be executed by Family Health International, located in North Carolina. Authorized for 5 years and \$28 million, the project will provide technical assistance in surveillance, blood screening, prevention of HIV spread through existing U.S.A.I.D.-funded health, population, and nutrition programs, and consultation on financing of AIDS health care and prevention. Health worker training and dissemination of technical information also will be supported.

2) AIDSCOM (AIDS Technical Support Project: Public Health Communication Component): AIDSCOM, a public health communications activity, was awarded to the Academy for Educational Development, which has offices in New York City and Washington, D.C. This activity, funded by a 5-year, \$15.4 million contract, will aim at general education and reducing high-risk behaviors.

3) Collaboration with CDC and NIH: A.I.D. is working with the Centers for Disease Control and the National Institutes of Health. For example, plans are currently being developed for A.I.D. support of a CDC intervention research project in Zaire. In the same vein, a joint A.I.D. and National Institute of Allergy and Infectious Disease (NIAID) conference will be held in mid-January 1988 to address anthropological perspectives on AIDS in Africa. The purpose is to establish research priorities for AIDS prevention.

In addition, A.I.D. is supporting a number of other AIDS-specific projects:

1) The A.I.D. Office of Population: In addition to supplying condoms, the Office of Population has supported a variety of AIDS activities through its ongoing projects. These have included operations research to assess the interaction of family planning and AIDS prevention activities, improved condoms and viricidal methods, and numerous training and educational activities.

2) Bureau of the Census: The U.S. Bureau of the Census has received funding from A.I.D. to establish an international HIV and AIDS database to track the incidence and prevalence of the disease. Surveys, publications, cabled reports, and other data sources will be used to create the database. Projection models will be utilized to estimate the course of the epidemic in various countries. These will provide an invaluable addendum to the World Health Organization AIDS surveillance efforts.

3) Missions: U.S.A.I.D. missions have undertaken their own activities. These range from educational efforts to providing reagents for blood-transfusion screening.

In addition, a number of AIDS intervention activities are being built into ongoing A.I.D. health, population, and nutrition projects such as: ensuring the use of sterile skin-piercing instruments; training of health workers in other programs and providing them with basic equipment to protect them from infection; and expanding data collection in AIDS related areas.

CONCLUSION

A.I.D. has acted rapidly, in the past year, to develop an effective AIDS policy and programs to implement it. In the coming year, we plan to accelerate the pace of this implementation.

We know how grim this epidemic has been and continues to be. However, there has been progress:

-- The World Health Organization and its participating countries have taken a leadership role.

-- There has been worldwide financial support for this World Health Organization leadership.

-- With regard to specific countries, it's heartening to see the actions of a number of seriously affected countries in recognizing their AIDS problem openly and publicly and — dealing with it.

-- There is also emerging evidence that people will change their behavior when provided with effective education.

These are hopeful signs which need to be built upon rapidly if there is to be progress in halting the spread of AIDS.

Appendix: The Agency AIDS policy

A.I.D. POLICY GUIDANCE ON AIDS

I. CONTEXT FOR AGENCY POLICY GUIDANCE ON AIDS

Acquired immune deficiency syndrome (AIDS) is a relatively newly recognized and devastating disease. Our knowledge about the causative agent of the disease, the possibilities for its prevention and control, and the course of the epidemic are changing rapidly. For these reasons and because of sensitivities surrounding the disease, this policy guidance is designed to be flexible. It is based on the situation now and will be revised as changes in technology, knowledge, incidence and sensitivities occur.

Despite these uncertainties, an Agency policy on AIDS is important. The incidence of AIDS cases this year is the result of infection which was transmitted as long as five years ago. It is imperative to tackle the problem now because infections transmitted this year will result in actual AIDS cases five or more years from now.

If the course of the disease results in outbreaks of major proportion in some countries as is predicted by many experts, there will be many serious implications for ongoing A.I.D. programs and for development prospects in those countries. Activities begun now, as outlined in the following policy guidance, should be the groundwork for major efforts later as they become necessary.

A.I.D. support for AIDS activities will depend upon the particular activity and whether it could best be supported by A.I.D. or another domestic or international agency; availability of funding and staff; absorptive capacity in LDCs as well as in donor agencies; political considerations and sensitivities; and available technology and knowledge upon which to base program responses.

At this point development of major bilateral efforts is constrained by political sensitivities in LDCs about the disease; lack of knowledge, expertise and experience in this area; inadequate financial and human resources; and, finally limited absorptive capacity of LDCs. This policy guidance will be reviewed and revised as knowledge and understanding of the disease and its spread are accumulated.

II. BACKGROUND

Acquired Immune Deficiency Syndrome (AIDS) is an epidemic of global concern. There are currently some five to ten million individuals infected worldwide. It is estimated that at least 10-30 percent of infected individuals will develop AIDS within five years, and an unknown percent will develop the disease eventually. Once frank AIDS develops it is fatal. Worldwide an estimated 50 to 100 million additional people will become infected over the next five years.

Human immunodeficiency virus (HIV), the cause of AIDS, is transmitted by sexual intercourse, through blood or blood products, and from mother to fetus. In the United States to date the epidemic has been confined largely to high risk groups including male homosexuals, intravenous drug users, and hemophiliacs. In Africa and certain Caribbean and South American countries AIDS and HIV infection occur among heterosexually active men and women and in their offspring. In Asia and the Near East, AIDS and HIV infection are still rare, but both the virus and the disease have recently been identified among high risk groups, indicating that the disease may also become epidemic in these areas.

A number of characteristics of the AIDS phenomenon make it a difficult problem with which to deal:

- 1) its causative agent and its transmission are not completely understood;
- 2) it is a devastating disease for which there is now no cure or vaccine;
- 3) its transmission is most frequently related to highly emotional and private behavior, e.g. sexual relations;
- 4) it has been associated in particular with the U.S. and with certain developing countries, and its origins and spread have been characterized variously for political reasons;
- 5) it could become a major epidemic of the type we have not seen in this century.

III. POLITICAL AND DEVELOPMENTAL IMPLICATIONS OF AIDS

A. Sensitivities

Transmission of AIDS is predominantly sexual, and to date its

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incidence is often associated with either homosexual practices or heterosexual prostitution. Prevention of the transmission of HIV infection will depend in large part upon changes in sexual behavior, an aspect of life which is one of the most intimate, sensitive and difficult to change. Educational messages will need to be very culture specific and have political backing within the country. Even so, this behavior will be difficult to change sufficiently to have an effect on transmission of the disease.

Promotion of condom use for AIDS control which is appropriate and effective in the U.S. and other Western countries could be construed by some as an indirect means of imposing population control in countries where family planning can still be somewhat sensitive.

B. Implications for Other A.I.D. Programs

Regardless of how the Agency becomes involved in AIDS programs, the disease has implications for other ongoing A.I.D.-funded programs. For example, AIDS may affect immunization, breastfeeding, and family planning programs. In immunization programs there is the possibility of transmission through unsterile needles, as well as the theoretical potential for activation of AIDS symptoms in already infected individuals by vaccines and the possibility of disseminated infections following the receipt of live vaccines. The possibility of transmission through breastmilk could affect A.I.D.-supported milk bank programs. Increasing numbers of AIDS cases may result in restrictions on international travel and training opportunities.

The implications of AIDS for the Agency's family planning program are several. AIDS prevention activities may have a positive effect on family planning efforts; on the other hand, promotion of condoms for AIDS prevention could create an association between condoms and high risk sexual behavior (including homosexual practices and prostitution). In addition, in areas where AIDS is widespread, it may become necessary to revise recommendations on use of other forms of contraceptives which do not simultaneously protect against AIDS.

C. Long-term Impact on Development

The long-term impact of AIDS on development is likely to be significant. The cost of dealing with AIDS in many countries will take funds and personnel that are needed for other government programs in health, family planning, education, and other priority areas, and could severely jeopardize the gains

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made in these sectors. The deaths of significant numbers of the population of productive age (e.g., from 20 to 40 years old) could constrain economic productivity. The disease is already present among the educated elite in a number of countries, and loss of this human resource could severely damage prospects for economic stability and progress. The economic and social impact of AIDS will in all likelihood be significant for individuals, families and countries.

IV. GLOBAL AIDS EFFORTS - THE WORLD HEALTH ORGANIZATION (WHO) GLOBAL AIDS PROGRAMME

WHO has taken the lead in developing and coordinating international AIDS programs. A Special Global Programme for AIDS has been established, reporting directly to the Director General. The proposed budget for this programme for 1987 is about dollars 44 million. A.I.D. played an important catalytic role in encouraging the formation of this programme, and in stimulating funding from other member countries. Financial contributions made by A.I.D. to WHO in FY 1986 were significant because they were the first contributions made to the Worldwide Programme (dollars 1 million) and to the WHO Africa Regional Programme (dollars 1 million). A.I.D. will continue to support and collaborate actively with the WHO programme.

V. POLICY GUIDELINES

A. A.I.D. SUPPORT MECHANISMS FOR AIDS ACTIVITIES

1. Bilateral Activities

A.I.D. resources for AIDS are limited because of other A.I.D. priorities, such as child survival. Staff resources to deal with AIDS are also limited. A.I.D. Health/Population/Nutrition and Education staff are already stretched in dealing with existing health, population, nutrition, child survival and human resource programs. AIDS is still a sensitive subject in many countries with political ramifications for bilateral programs. For these reasons A.I.D. will not mount major bilateral programs aimed specifically at AIDS at this time, although some bilateral activities are appropriate. The types of bilaterally-funded activities which are appropriate are spelled out in the following section outlining Specific Activities Addressing AIDS. Bilateral activities should complement WHO programs and centrally-funded activities. Many activities of interest to missions can be supported through existing or emerging centrally-funded mechanisms.

2. Central Activities

Central projects should complement WHO programs and bilateral health and family planning programs which may include some AIDS activities. Types of central support also will be discussed under the next section of the guidance.

Large centrally funded cooperating agencies (especially through the Office of Population) may be able to carry out some activities addressing AIDS through their existing contracts without incurring significant additional expenses. However, there will undoubtedly be requests for help from these groups from LDCs which will require additional funding. Cooperating agencies should respond to such requests (consistent with the following guidance) if this can be done without jeopardizing other priority activities or without risking a backlash due to LDC sensitivities.

3. Regional Activities

Regional activities should generally follow the guidelines for centrally funded activities.

B. Specific Activities Addressing AIDS

1. Research

Because AIDS is endemic within the U.S., basic biomedical and social science research activities are carried out by DHHS. The epidemic nature of the disease means that the health of U.S. citizens can benefit from international research, including collaborative epidemiologic, serologic, and virologic studies in different settings. As a result, CDC, NIE, and DOD, have undertaken studies in Africa and elsewhere. WHO's programme includes epidemiological research. While U.S. efforts overseas should be undertaken in a coordinated fashion, A.I.D. is not the appropriate agency to coordinate these efforts since they are beyond the scope of U.S. foreign assistance or are being undertaken by WHO.

Biomedical Research

Biomedical research, such as development of vaccines and drugs, is of interest to and can be undertaken by private sector firms and is being undertaken by other parts of the U.S. Government and therefore should not be undertaken by A.I.D.

Epidemiological and Behavioral Research

Both epidemiological research to determine the pattern of infection and disease, and behavioral or anthropological research to determine the implications of changing the behavior which is associated with the transmission of the disease are important.

Epidemiological research is being undertaken by WHO, USG agencies and national researchers. A.I.D. will not undertake research which can be funded by other USG agencies, other donors or WHO.

Where A.I.D. has expertise and experience the Agency could support behavioral or anthropological research into the particular practices and their contexts, in order to provide information on how these practices may be changed. This research may be supported bilaterally or centrally.

Operations Research

Operations research can help determine, for example, under what circumstances an AIDS health communication effort using mass media is feasible; whether family planning workers are effective sources of information about AIDS control; and, whether it is possible to change sexual practices through the media, health worker training and availability of spermicides or other viricidal agents. Operations research can improve our understanding of the circumstances in which existing family planning programs might be constructively linked with prevention of AIDS, or on the other hand might be adversely affected by being linked to an AIDS campaign. A.I.D. has considerable experience in operations research, particularly as part of our population and health programs, and should support these efforts where appropriate bilaterally or centrally. Operations research can also explore the role of public health communications in reducing risk due to other means of transmission.

Economic Research

Because of the serious implications of AIDS for development and especially for A.I.D. programs, A.I.D. will support research on the longer-term development and economic effects of the AIDS epidemic through central or bilateral mechanisms. This includes the potential impact on health budgets, economic productivity, child survival, and other issues.

2. Information Exchange

Many unknowns, uncertainties and sensitivities about AIDS and the speed with which it has spread make sharing and exchange of information between scientists, politicians, and development workers critical. There is a danger of inadvertent as well as deliberate misinformation about AIDS, and steps are being taken through WHO and other channels to correct such information. WHO has the primary role in coordinating and disseminating information and A.I.D. will support WHO in this area.

A.I.D./Washington will provide information to missions on a regular basis so that A.I.D. field staff is fully informed with the latest information on the disease and worldwide activities addressing it.

A.I.D. may join other donors or Agencies in supporting international meetings and we may support participation of LDC representatives, but we will not directly and solely sponsor international meetings or clearing houses on AIDS. A.I.D. may support efforts to compile and disseminate reliable technical information on AIDS.

3. Training

Information, education and training about how to deal with prevention and control of AIDS are very important. Training can include in-country training in the context of ongoing health and population programs; participant training, including study tours; and, funding for attendance at international meetings on AIDS. Mission or central funds may be used to support study tours or participation in meetings on AIDS. In-country service worker training or retraining should probably be mission funded. In some cases with very little additional resource input, A.I.D. could become more actively involved in health and family planning worker training on AIDS. A.I.D. centrally funded contractors have already begun and will continue to include AIDS information in training curricula for health and family planning workers.

Information and education about the transmission by skin piercing instruments should be built into training components of A.I.D.-funded immunization programs.

4. Public Health Education

Public health education methods, including social marketing techniques, aimed at preventing transmission of AIDS is critical since there is no cure for the disease at this time.

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Given the poorly understood nature of AIDS and its potential for misunderstanding, we need to be sure we have the right message(s), and that the media are used sensitively with proper attention to cultural and other factors, particularly in regard to communications dealing with sexual transmission. The WHO Global AIDS Programme includes a component on education for prevention of transmission. A.I.D. will support and collaborate with this WHO activity. Several developing countries have already begun public education campaigns about the risk behaviors which are associated with transmission of the infection. A.I.D. support for education about prevention of sexual transmission will emphasize the importance of sexual abstinence or long term stable relationships. Assistance for education efforts and distribution of prophylactics against transmission will be based on the cultural and religious norms of the countries being assisted.

The U.S. has considerable experience in social marketing of contraceptives and with other health promotion modalities which could be useful in developing campaigns to prevent AIDS. Use of condoms will play a central role, but will not be the only behavioral change indicated. However, behavioral changes to prevent particularly sexual transmission of AIDS differ from those required for other health or family planning behaviors, and we do not yet know which messages about AIDS will be effective in particular situations and with different target groups. Moreover, information and education used in the U.S. about AIDS does not translate easily to developing countries. Before we become directly involved in free-standing AIDS information, education and communication (IE&C) efforts we need to answer some critical questions through social science and operations research and to ensure that host countries really want our help. Initially, A.I.D. support for IE&C efforts should be approached through operations research projects and through the WHO program. Direct bilateral support for free-standing communications programs for AIDS prevention may be appropriate in the future.

5. Prevention of Sexual Transmission

In addition to support for operations research on public health education aimed at preventing sexual transmission of AIDS, A.I.D. will procure and provide condoms for AIDS prevention programs on request. Condoms will be procured through the existing central procurement mechanism, which is a buy-in project. If there is substantial demand for additional condoms, funding will probably need to come from both bilateral and central sources. A.I.D. may also assist in procurement of condoms for WHO on a reimbursable basis.

6. Prevention of Blood Transmission

Blood screening programs are an important means of preventing transmission of the virus through blood transfusions. The WHO Programme includes support for development of these programs, and WHO has already provided equipment and supplies for such programs to some countries. A.I.D. will support WHO efforts to prevent blood transmission of AIDS. A.I.D. will also fund the purchase of equipment and supplies for blood screening programs on request and where funds are available (and where WHO funding is not available), keeping in mind the recurrent cost implications of blood screening programs, including costs for reagents, and the need for host countries to plan for this continued expense.

The cost of reagents for blood screening may decrease as new, technologically appropriate diagnostic tests become available. If private firms are not interested in developing diagnostic tests for LDC markets, A.I.D. may need to support adaptation of diagnostic tests to make them technologically appropriate for LDCs and may need to facilitate their distribution.

7. Prevention of Perinatal Transmission

WHO will support efforts to reduce perinatal transmission of HIV. This may involve counseling of infected women not to have children and the option of abortion for infected pregnant women. A.I.D.'s priority on child survival makes perinatal transmission a real concern. The need to counsel women and men who wish to become parents about the risks of passing on the infection to their offspring may arise within the context of A.I.D. MCH and family planning programs. However, A.I.D. will not support any involvement in any activities that include abortion.

8. Vaccination Efforts

As previously stated, A.I.D. will not fund vaccine research and development efforts. Due to the sensitivities of setting up vaccine testing sites in LDCs and disputes over data between researchers, A.I.D. should let WHO take the lead in this area.

Should a vaccine become available, A.I.D. will consider supporting procurement of vaccines and immunization materials and the implementation of vaccination programs.

9. Care for AIDS Cases

Under the Agency Health Policy, A.I.D. does not generally

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support curative health care. In the case of AIDS there are currently no known therapeutic agents for HIV infection.

A.I.D. will support WHO efforts to reduce the impact of HIV infection on individuals, groups and society.

C. Implications for Other A.I.D. Programs

In addition to support for some activities to address AIDS, A.I.D. must be concerned about and monitor the implications of the disease and its prevention and control for other A.I.D. programs. AIDS concerns affecting on-going A.I.D. programs include: immunization, breastfeeding, and family planning activities. A.I.D. missions should monitor these areas closely. A.I.D./Washington will develop further guidance if necessary.

1. Immunization Programs

Although there are no known cases in which the AIDS virus has been transmitted through immunization programs, use of unsterile needles and syringes has been documented to result in transmission. Even if immunization programs do not transmit the virus, it is possible that use of unsterile implements could transmit HIV. Even if this means of transmission is not in fact a viable means of spread, associations may be made between use of unsterile implements in A.I.D.-funded vaccination programs and incidence of disease. For these reasons, caution must be taken to ensure use of sterile equipment. A.I.D. is following the WHO guidance which recommends against use of disposable needles because they cannot be sterilized and are often reused. Use of reusable needles and care about their sterilization is the recommended procedure. All A.I.D.-funded immunization programs should make certain that adequate supplies of reusable needles and syringes are available, that adequate sterilizing equipment is in use, and that upgraded training is provided for health workers to ensure use of sterile implements.

A.I.D. will continue to follow WHO guidelines on immunization of all children and pregnant women in spite of the theoretical potential for activation of AIDS symptoms in already infected individuals by vaccines and the possibility of disseminated infections following the receipt of live vaccines. As long as the threat of immunizable diseases to the health of children in LDCs remains higher than the threat of AIDS, the WHO guidelines will be followed by A.I.D.

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2. Breastfeeding Programs

There is no convincing evidence that AIDS has been spread through breastmilk, yet there is the possibility that the virus could be transmitted in this way. It is important that A.I.D. missions be aware of this potential and of the possibility that association could be drawn between confirmed pediatric AIDS cases and participation in milk bank programs. If evidence for this mode of transmission is found, new guidance on promotion of breastfeeding and milk banks will be issued.

3. Family Planning

- The family planning community has a number of advantages that can be brought to bear on AIDS prevention. It has a strong PVO infrastructure which is now in place and in large measure eager to undertake AIDS prevention activity. It also has experience reaching the reproductive age group with somewhat similar services. There is also significant commonality between means used to interrupt the transmission of AIDS - including promotion of monogamy, abstinence, condom and spermicide/viricide use - and methods used to space births.

On the negative side, there is legitimate concern that the association of AIDS with condoms could result in a stigma for condoms which family planning organizations have spent years and substantial resources to counteract. Similarly, there is a potential stigma for family planning organizations more generally, particularly if activities are targeted toward high risk groups such as prostitutes or drug users.

Lastly, there is the clear potential dilemma both for individuals and programs regarding condom use versus other effective contraceptive methods. Without clear confidence that a couple is monogamous and that neither partner is infected, there may be a compelling argument for condom use. While condom use and the use of other methods are not mutually exclusive, this may pose a significant operational problem. It is anticipated that most or all of these issues regarding potential effects on family planning will be addressed through operations research.

Responses of Dr. Allred to Questions Asked by Committee

1. Counseling by physicians. The Board of Directors of the American Medical Association has stated that perhaps the greatest need at the present time is effective counseling of both low-risk and high-risk populations by physicians or other health care counselors. What is your view of that assessment?

1. In general I agree with this statement. Short of measures to separate infected individuals from the uninfected population, which would undoubtedly cause tremendous social and economic dislocation, education is our only hope of limiting the spread of this disease. This includes education of the general population, which is presumably at low risk, and education of uninfected individuals in high risk groups (male homosexuals, IV drug users) that they might avoid infection. Education of individuals who are already infected is of doubtful utility. These individuals can not be relied on to behave in a socially responsible way because they literally have nothing left to lose, regardless of whatever behavior they choose to adopt (studies have shown that sexual activity in homosexual men actually increases when they learn they have been infected with HIV).

The HIV epidemic is in large measure a voluntary epidemic. At least 90% of infected individuals are infected because of activities in which they voluntarily engaged. The other 10% are true innocent victims.

If we -- we meaning health professionals, government agencies, citizens groups, educators, and other responsible individuals -- can effectively instill in uninfected individuals the desire to avoid high risk activity then the spread of the virus may be limited. Candidly, however, I am not optimistic about this. Sexual behavior is one arena in which education has been shown to be of limited usefulness. Regardless of educational efforts, people are inclined to set and follow their own norms of sexual behavior.

2. CDC guidelines for hospital personnel. The CDC has issued guidelines for the protection of hospital personnel. Are you familiar with these guidelines? Does the hospital in which you practice follow these guidelines rigorously? Are the guidelines adequate, in your view, to protect health care personnel?

2. I am very familiar with the CDC guidelines for the protection of health professionals. They are generally followed in our hospital. How rigorously they are employed varies somewhat from individual to individual. The guidelines, if followed, should be adequate to insure the safety of patients and health care workers alike. Our hospital, and, I suspect, most hospitals, have fallen short of punitive measures directed against laxity in hospital employees as a means to force observance of the guidelines. To date efforts have been principally educational. As the disease spreads and we see more cases in every community hospital, then health care workers probably will be more impressed by educational programs and, correspondingly, will follow the guidelines more closely.

3. Identification of AIDS carriers by some visible sign.
 The Surgeon General's report on AIDS, issued in October 1986, counsels against the marking of AIDS virus carriers by some visible sign. How would you respond to the Surgeon General's assertion that any identification of carriers would require testing of the entire population which is "unnecessary, unmanageable and costly?"

3. Seth Haber, M.D., Chief of Pathology at Kaiser Foundation Hospital, Santa Clara, California, recently made an interesting proposal in a editorial published in CAP Today (the newsletter of the College of American Pathologists, of which I am a Fellow). Dr. Haber suggested that all HIV carriers be tattooed with the incriminating letters just above the pubic bone. This would be apparent only in intimate circumstances -- and an uninfected person might thereby avoid a high risk contact. Knowing Dr. Haber I suspect he suggested this only half tongue-in-cheek. If the disease does become widely spread in the heterosexual population such an extreme measure might become necessary. It is considerably less draconian than enforced quarantine and less stigmatizing than a more visible mark.

A nationwide program of identification of HIV carriers would indeed require the eventual, and probably repeated, testing of the entire population. As to whether it would be "unnecessary, unmanageable, and costly", that remains to be seen. It certainly would be much less costly than treating millions of AIDS cases. It may eventually prove necessary as the only way to prevent the spread of the infection into large segments of the population. As to manageability, that is only a question of the national will. When a high enough percentage of the population desires that everyone be tested then such a testing program will become a reality.

That, of course, begs the harder question. What do you do with large number of asymptomatic carriers? Mark them for life with a visible sign -- the 20th century scarlet "A"? Force them into exile or lifelong quarantine? I prognosticate that these are questions that will try -- and perhaps destroy -- the very fiber of our national soul.

Responses of Dr. Clinton to Questions Asked by Committee

Q1: Port access. We are all familiar with the incident in which Costa Rica refused to allow our ship to make a routine port call because the captain could not assure that every member of the ship was certifiably free of the AIDS virus.

Have there been any similar incidents elsewhere in the world?

A: A planned visit to Costa Rica last year was cancelled by the U.S. Navy, following reports that local requirements could not be met through the issuance of a statement of DoD testing and deployment policy. Costa Rica insisted on certification that all personnel authorized to go ashore had been tested for HIV and found to be negative. We know of no instance, other than Costa Rica, in which a scheduled port call was cancelled for reasons related to local concern over possible AIDS-related health hazards.

Q4: Discussion of AIDS with allies. Has the Department of Defense initiated discussions about AIDS and the impact of the disease on our military access with our allies in NATO or in Asia?

A: Discussions intended to explore specifically the impact of AIDS on our military access have not been initiated. However, other AIDS-related discussions with our allies have been proceeding for some time. AIDS is one of the topics regularly discussed by U.S. military health personnel with health officials of allied countries (among them Japan, Korea and the Philippines). Similarly, discussions are proceeding with several NATO Allies regarding implementation of the recently instituted U.S. requirement that all potential foreign military trainees be tested for AIDS as part of the required pre-travel physical examination.

ADDITIONAL QUESTIONS

5. Anti-U.S. propaganda. What steps has the Department taken, if any, to counter anti-U.S. allegations that American troops spread AIDS?

What impact has this anti-U.S. propaganda campaign had on countries in which we maintain military installations?

A. As a result of the active Soviet disinformation campaign, the U.S. has initiated numerous steps to counter the anti-U.S. allegations by sensitizing military commands to the problem, and providing easy to use, accurate information on what the Soviets and the U.S. are doing.

The U.S. has made available to foreign newspapers and government officials much factual information on the Soviet campaign; ambassadors and public affairs officers at U.S. embassies around the world have written letters to and met with the editors of papers that have published the disinformation; and the U.S. government has privately protested to the Soviets through diplomatic channels. Nevertheless, the false charges blaming the U.S. for creating and spreading the AIDS virus continue to reappear.

Military authorities through appropriate channels can engage in activities such as: speeches, public affairs releases, videotapes, and brochures. AIDS primary prevention education should be intensified. Military personnel also should be briefed that their own behavior may be grist for the Soviet disinformation mill and could be our best defense against Soviet disinformation.

Q1: How are you determining the relative dangers of bases and ports of call in African and especially, in Central African countries which are struck so heavily by AIDS? Please be specific by country and by army in those countries as to the degree of AIDS infection and cases.

A. Present DoD policy does not limit entry of U.S. Service members into foreign countries because of the presence of disease, including Human Immunodeficiency Virus (HIV). As in the case of other sexually transmitted diseases to which US Service members may be potentially exposed, the key to the prevention of HIV transmission is education. The DoD policy requires an aggressive education program, which is now in place. As part of this effort, military personnel are warned about the dangers of contracting HIV from local prostitutes. Education in the use of condoms is also included; these are readily available to service members during port calls.

In considering DoD port call policy, we must remember that HIV, like all sexually transmitted diseases, is not constrained by geographical or political boundaries. In the United States, New York City, San Francisco, Los Angeles, Houston, Washington, D.C., and Miami--areas where U.S. service members are stationed or frequently take leave--are the cities with the highest prevalence of HIV infection and AIDS cases. Prostitutes worldwide, and not just in certain specific regions overseas, weaken their immune systems through drug use and unstable lifestyles, paving the way to acquire and subsequently to spread HIV infection.

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With specific regard to Central Africa, the degree of HIV infection and number of AIDS cases is unknown, because of poor health reporting within the countries and reluctance of countries to admit the extent of the AIDS problem. In addition, "AIDS deaths" usually result from opportunistic infections or other infectious diseases such as tuberculosis. Deaths are attributed to the infectious disease rather than AIDS, the underlying cause. The best estimate of HIV prevalence is based on anecdotal reporting and limited sample surveys. These estimates place HIV prevalence between one and thirty percent of the sexually active urban population (15-49 year age group) in the region and a significantly lower prevalence (0.1 to 2 percent) in rural areas. Military personnel are generally considered to be at higher risk of HIV infection and may have a somewhat higher HIV prevalence.

Responses Dr. Mason to Questions Asked by Committee

1. INTERNATIONAL COOPERATION. Does the CDC evaluate AIDS programs or projects in other countries to determine which ones have merit?

Does the CDC fund any programs or projects overseas? If no, please describe those programs or projects.

ANSWER

At the request of the World Health Organization (WHO), the U.S. Agency for International Development (USAID), or on some occasions individual countries, CDC provides technical assistance in developing and evaluating AIDS programs in other countries (See Attachment).

Since 1984, CDC has partially funded an AIDS project, named Project SIDA, in Kinshasa, Zaire. This project is a collaborative effort between the Government of Zaire, the National Institute of Allergy and Infectious Diseases of the National Institutes of Health, the Belgium Institute of Tropical Medicine, the Armed Forces Institute of Pathology, and CDC. In this project, studies are conducted to define the prevalence and incidence of the human immunodeficiency virus (HIV) infection, risk factors for infection, high-risk groups, modes of transmission, and means of prevention and control.

2. AIDS TESTING. Currently the most widely used AIDS antibody test -- the ELISA test -- costs between \$1-\$3 in the United States and machines to interpret test results cost between \$5,000 and \$15,500. What is the likelihood of the availability of a simpler, less expensive blood test in the near future? If an inexpensive test is developed, what would be your view of the return on investment of increased testing of certain populations in this country and in other countries?

ANSWER

Several laboratory tests are currently being developed which are technologically simpler to perform than the standard ELISA test. The tests do not require sophisticated machines or prolonged training to perform. Since these tests are still in development and evaluation, the cost of the tests and their ultimate acceptability are not yet known. However, it is unlikely that the cost will be significantly below \$1. A cheap and easy-to-perform test with acceptable quality of results would greatly enhance efforts to conduct additional testing in the United States and abroad.

3. COMPREHENSIVE EDUCATION PROGRAM. I understand that Great Britain has launched a very extensive AIDS education program, including distribution of pamphlets in every home, paid newspaper advertisements, etc. Should this country be undertaking a similarly aggressive education campaign?

ANSWER

The CDC has initiated an aggressive National AIDS Information and Education Program, which is composed of four major components:

- (1) A media-based information and education campaign, which provides information about AIDS through the use of mass media as well as through other communication channels. The campaign uses Public Service Announcements (PSA's) to place these messages. The response of the television and radio stations to these ads has been very favorable, and they have gotten wide play on many television and radio stations and networks.
- (2) A Government in Partnership Program which attempts to get greater involvement of the private sector in AIDS education and prevention.
- (3) A minority outreach effort that targets educational efforts to minority communities which suffer from AIDS disproportionately.
- (4) An information services component which provides information to the American public through its operation of the National AIDS toll-free Hotline and the National AIDS Information Clearinghouse.

These efforts are in addition to other CDC AIDS Education and Prevention efforts such as the Health Education-Risk Reduction and Testing and Counseling Program Grants funded through State and local health agencies, and School-based AIDS Education Programs, which also target out-of-school youths.

The CDC is also in the process of developing and testing a brochure intended for mailing to all U.S. households. The mailing will occur at the end of June 1988.

4. COST OF EDUCATION CAMPAIGN. What is the CDC presently spending on its educational activities related to AIDS? What level of resources would be needed to launch an aggressive prime time television and radio paid advertising campaign?

ANSWER

The fiscal year 1987 expenditures for AIDS Information and Education Programs at CDC were \$104.4 million, and the approximate budget for fiscal year 1988 is expected to be \$204.5 million. We have not attempted to figure the cost of a paid advertising campaign, but it would be well into the multimillions of dollars. For example, the estimated value of our 60-second AIDS Public Service Announcement which ran during the Bill Cosby Show on November 19, 1987, was \$900,000. CDC's AIDS PSA's were distributed in mid October, and their broadcasting began in late October. In October, 312 CDC spots were aired, with a commercial value of

\$511,255. However, a number of other AIDS spots were aired on radio and television in October so that the total number of AIDS PSA's aired in October was 3,383, at an estimated value of \$3,965,428.

5. WORLD TRAVEL RESTRICTIONS. Earlier this year, the CDC issued a report recommending a greatly-expanded program of voluntary testing nationwide. Did that report address testing of foreigners entering the U.S.?

If so, what recommendations were made with regard to aliens, immigrants, or foreign visitors?

If not, do you have an opinion about whether all foreign visitors should be tested?

ANSWER

The report did not address aliens, immigrants, or foreign visitors.

In August 1987, the Public Health Service (PHS) added HIV infection to the list of "Dangerous Contagious Diseases", which, when detected during the required visa medical examination, would exclude a person from obtaining an immigrant visa. Effective December 1, 1987, all aliens seeking permanent residency in the United States are being screened for HIV infection as part of their required visa medical examination. This action was taken to comply with Public Law 100-71, and to prevent transmission of HIV from infected people to the American public.

The PHS does not recommend adopting a policy of expanding the medical examination to other aliens, including foreign visitors. It would do little to help prevent the spread of HIV infection. Taking such a step would lead to reciprocal actions by other nations. This in turn would result in extraordinary demands from U.S. travelers on our testing and counseling capabilities. Needed resources and services would then be diverted from persons most at risk of HIV infection.

6. FEARS AND PREJUDICES ABOUT AIDS INHIBITING SURVEILLANCE AND REPORTING. Fear and prejudice about AIDS within and among nations has inhibited surveillance and reporting efforts in countries reluctant to publicly acknowledge the extent of their AIDS problem. Does the CDC work directly with other nations to overcome these fears and prejudices to develop AIDS control strategies?

ANSWER

Much of the initial fear regarding reporting AIDS cases to WHO has now subsided. Of 158 countries reporting to WHO, 128 have reported cases of AIDS. However, underreporting is still a significant problem due to the lack of surveillance and reporting systems, the difficulty in establishing the diagnosis, and failure to report known cases. CDC continues to work with WHO, USAID, and foreign governments to encourage better surveillance, reporting, and development of prevention and control strategies.

7. PHS DESIGNATION OF HIV INFECTION AS A "DANGEROUS, CONTAGIOUS DISEASE." In your testimony, you indicated that regulations were promulgated adding the HIV infection to the list of "Dangerous, Contagious Diseases" for determining eligibility for visas. Another witness indicated that the PHS has not recommended to state public health departments that HIV infection be reported to them by physicians as a dangerous, contagious disease.

Has the PHS made any such recommendation to state public health departments? If not, please comment on the reasons for not doing so.

ANSWER

Each State or local health jurisdiction is responsible for deciding whether AIDS, HIV infection, or any other disease or condition will be reportable, and several States have already made HIV infection reportable. The PHS advocates the reporting of HIV infection for specific public health purposes, such as patient counseling and sex partner referral, and many of the previously published PHS guidelines and recommendations for interrupting the transmission of HIV are based on knowledge of who is infected. The PHS will continue to discuss expanded reporting of HIV infection with representatives of the Council of State and Territorial Epidemiologists and the Association of State and Territorial Health Officers.

8. CDC CASE DEFINITION CRITERIA. Dr. Ronald St John, in his testimony at the hearing on behalf of the World Health Organization, characterized the CDC-established case definition criteria as "fairly strict", and indicated that the definition has been revised three times in four years. What are the present CDC case definition criteria? Do you agree with Dr. St John's characterization of the criteria as "fairly strict"? Is the CDC presently working to revise further these criteria?

ANSWER

The CDC criteria for AIDS are indeed "fairly strict" and are somewhat rigid for a specific reason. With strict criteria, there is a high degree of specificity, that is, cases of AIDS reported are indeed AIDS and not some other medical condition. If an overly simple case definition is used (e.g., the presence of fever, diarrhea, and weight loss), many cases would be reported that really are not AIDS.

The CDC case definition has been revised in the past and will be revised in the future to improve its sensitivity and specificity further. In addition, the CDC case definition is intended for surveillance in the United States where diagnostic capabilities are good and resources are available. Therefore, use of the CDC case definition may not be practical in many countries where HIV testing may not be available and diagnostic capabilities are limited. In October 1985, a WHO Conference in Bangui proposed a case definition for Africa which is much simplified and relies only upon clinical features. Although this definition may be much more useful in Africa, the sensitivity and specificity is much lower than the CDC case definition. A similar simplified case definition has not yet been developed for Central and South America, where the clinical spectrum of AIDS may be different from that in Africa and the United States.

INTERNATIONAL AIDS ACTIVITIES SUPPORTED BY CDC

Country	Project Title	Principal Investigator/ Contact Person	Date Starting Ending	Funding	
				Total	FY
<u>Center for Prevention Services</u>					
Zaire	Measles in Hospitalized Lauri Markowitz* African Children Infected with HIV		3/86-Paper prepared 12/87	Funded by NIH and Project SIDA	
Zaire	Retrospective and Prospective Study of the Safety and Immunogenicity of Routine Childhood Immunization	Ida Onorato*	9/86 ongoing	Funded by AID Program Office	
Zaire	Community-based Study of Measles Severity in HIV Infected and Uninfected Children	Ida Onorato*	9/86 Planning Stage only	Not yet funded	
Geneva	WHO meeting to formulate recommendation for HIV Infected Children in EPI Countries	Ida Onorato*	6/87	Who funded	
*Personnel time only provided by DOI					
<u>Center for Infectious Diseases</u>					
Zaire	Project SIDA	Dr. Robin Ryder (Zaire) Dr. William Heyward (CDC) Dr. James Curran (CDC)	4/84 Indefinite	\$1,200,000*	1987

*Includes interagency agreements with NIH and AFIP.

INTERNATIONAL AIDS ACTIVITIES SUPPORTED BY CDC

Country	Project Title	Principal Investigator/ Contact Person	Date		Funding	
			Starting	Ending	Total	FY
<u>Training and Laboratory Program Office</u>						
Brazil	"Serodiagnosis of HIV Infections" (Training Course)	J. Richard George, Ph.D.	Nov. 1-8, 1986		\$2,300 (PAHO)	1987
Mexico	"	"	June 13-20, 1987		\$2,000 (PAHO)	1987
Egypt	"	"	June 26-July 4, 1987		\$4,000 (WHO)	1987
Panama	"	"	Nov. 7-14, 1987		\$2,000 (PAHO)	1988
Brazil	"	"	Nov. 15-21, 1987		\$2,000 (PAHO)	1988
Pakistan	"	"	Nov. 29-Dec. 5, 1987		\$2,950 (WHO)	1988

INTERNATIONAL AIDS ACTIVITIES SUPPORTED BY CDC

Country	Project Title	Principal Investigator/ Contact Person	Date		Funding	
			Starting	Ending	Total	FY
<u>Center for Health Promotion and Education</u>						
Zaire	HIV Prevention Project*	Herbert Peterson, M.D.	3/88	9/88	\$255,000	1988

*The HIV Prevention Project will test the feasibility of implementing a 3-year demonstration project to (1) develop an intervention strategy for increasing condom usage by sexual partners, one member of who is infected with HIV; and (2) to study the efficacy of condom use in preventing HIV transmission in such couples.

1/21/88
Revised 2/1/88

Responses of Dr. Fauci to Questions Asked by Committee

1. NIH investment in foreign laboratories. Does the NIH invest any of its resources in foreign laboratories? Should it be doing more to enhance the existing international network of the sciences concerned with human health, particularly in light of the AIDS epidemic?

Answer

Through its research grant, contract, fellowship and exchange programs, the NIH supports research in foreign laboratories when it is relevant to the improvement of the health of the U.S. populace. Approximately \$39 million was expended on such activities in FY 1987. The NIH is continually exploring ways to strengthen biomedical research through international collaboration, primarily through dialogue and cooperative arrangements with foreign research institutions and multilateral organizations. Collaborative programs established in specific response to the AIDS epidemic include the International Collaboration in AIDS Research Program and the Special International Postdoctoral Research Program in AIDS, both of which provide support for foreign scientists to perform AIDS-related research.

2. International AIDS Data Bank. The Senate currently has legislation awaiting full Senate action which directs the Secretary to establish an International AIDS Data Bank within the National Library of Medicine. Do you support this idea, or should such an international data bank be maintained through an international organization such as the World Health Organization?

Answer

The NLM is a logical place for such a data bank since the library is well known as a pioneer in developing computerized information resources and providing specialized information services. NLM currently manages the largest international data base on medicine, MEDLINE, and makes this and other data bases available throughout the world.

The NLM was established "to assist the advancement of medical and related sciences and to aid the dissemination and exchange of scientific and other information important to the progress of medicine and to the public health." Under this legislative mandate NLM is now developing a specific AIDS data bank based, in part, on data already available in NLM data bases that will provide this important information to researchers and physicians world-wide.

3. Evaluation of research overseas. Does the NIH evaluate applied research projects being conducted overseas, particularly efforts pertaining to the development and evaluation of AIDS treatments and vaccines?

If not, should such an evaluation be initiated?

If an ongoing international research evaluation program were in place, would you recommend that NIH commit its resources to provide support and assistance to projects of merit?

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Answer

Evaluation of overseas AIDS research projects including those pertaining to the development and evaluation of AIDS treatments and vaccines by the NIH is conducted on a case by case basis as part of the peer review process at the NIH including grants, contracts, and cooperative agreements. There is, however, no generic review of such projects outside those that relate to the NIH for funding or collaborative purposes. NIH is committed to providing support for meritorious international AIDS research, but this is best accomplished through traditional funding routes and mechanisms. A number of new initiatives undertaken by the NIH, including the program to establish International Collaboration in AIDS Research and a Special International Postdoctoral Research Program in AIDS, will do much to strengthen international AIDS research capabilities.

4. Early this year, there were press reports of an AIDS vaccine trial being conducted in Zaire, a trial about which I gather the World Health Organization and the NIH had no knowledge. Can you tell us anything now about that trial? What implications does this experience have for international cooperation with respect to the AIDS epidemic?

Answer

Dr. Zagury, at the Madame Curie University in France, is the organizer of these trials. At the present time there is no conclusive data available from these trials. He did, however, publish and present preliminary data in the March 19, 1987, issue of Nature (pages 249-250) and present at the International AIDS Conference held in Washington, D.C. in June 1987. It is too early to make any determination regarding the impact this study might have on international cooperation.

5. Cooperation with the Soviets. Is the NIH working cooperatively in any way with the Soviet Union on AIDS research?

If so, what is the nature and extent of the cooperative research?

If not, have the Soviets made any effort to seek such a cooperative research effort?

Has the U.S. approached the Soviets in an effort to work together on this problem? If not, why not?

Answer

NIH does not have any current involvement with the Soviet Union in AIDS research. Because of the Soviet-inspired "disinformation" campaign, which alleges that the AIDS virus was manufactured and spread by a U.S. military laboratory, the Department of State imposed a ban last year on any cooperation with the Soviet Union related to AIDS research.

The Soviets proposed bilateral cooperation on AIDS at the Eighth Session of the US-USSR Joint Committee for Health in April 1987. The Committee meets to review activities under the US-USSR Agreement for Cooperation in Medical Science and Public Health. At that meeting, the Surgeon General, at the instruction of the White House and the State Department, delivered a strong

protest to the Soviet delegation over their country's disinformation campaign. He stated that future bilateral cooperation on AIDS would not be possible as long as the disinformation campaign continues. This policy remains in effect and there has been no subsequent dialogue between NIH and the Soviets on AIDS research.

6. Blood supply testing. Testimony at the hearing indicated that somewhere in the range of four to five HIV positive blood units per million slip through the initial screening test because donors come in during the window when they are infected and yet not antibody positive. You stated that if enough sophisticated testing were done, it is possible to determine if someone is carrying the virus even if he does not have the antibodies.

What would be the costs associated with the kind of sophisticated testing you described to insure the integrity of the blood supply transfusions?

What is your view of the necessity or advisability of conducting this kind of sophisticated testing on every unit of blood?

Answer

The estimate of 4-5 infectious units of blood per million slipping through current screening procedures each year may be slightly low. A better estimate is 50-100 units total per year or 5-10 per million. Current costs of ELISA testing for HIV-antibodies are about \$1.50 per test or \$15 million per year. More sophisticated tests for HIV P-24 antigen are now well into their developmental process. The cost for this test is estimated to be about \$10 per test, or \$100 million per year. A much more sophisticated and sensitive test utilizing a polymerase chain reaction is under early development at present. A current cost estimate for this procedure is \$60 per test or \$600 million per year. While theoretically possible, virus culture is logistically impractical, insensitive, and excessively costly. No laboratory test is 100% sensitive or specific. Consequently, although the DNA polymerase based test is more sensitive than the P-24 antigen ELISA mentioned above, it will almost certainly not be 100% sensitive in detecting infectious units.

The public attitude over the past few years has been to require that any new test that might reduce the potential for transmitting HIV infection by blood transfusion should be implemented as soon as possible. The public will accept no more than zero risk. Cost considerations have been decidedly secondary in this reasoning. Nearly all blood donors found to have antibodies to HIV have engaged in high risk behavior in the past and since the epidemic began. Therefore, the most efficient, effective, and advisable course would be to devise and implement strategies for excluding such donors or their units from the transfusable blood pool. These require improved donor education to assure that they receive, understand, and act upon the information provided. Developmental and implementation costs for such programs will always be less than testing with the most sophisticated procedures, including those tests yet to be developed, even if current cost estimates can be markedly reduced.

Responses of Dr. Clinton to Questions Asked by Senator Pell

Question #2: AIDS testing in the military. How often would AIDS tests have to be conducted to make assurances that all of our troops are certifiably free of the AIDS virus? What would be the cost associated with such frequent testing?

Answer: Antibodies to HIV can be detected as early as two weeks after infection, although 2-3 months is more typical. In sexually transmitted HIV infection, variation in the length of the latent HIV infection may result from differences in the virulence, infectious dose, mode of transmission, host response, and also in the frequency of exposure. To certify that our troops are free of HIV infection would require testing every individual soldier at least every two weeks. The cost of testing of the active duty force is approximately \$20 million annually (\$10 million for actual test costs and \$10 million for administrative costs). Testing every two weeks would cost over .5 billion dollars annually. Such testing would identify only a few HIV positive military personnel not currently identified under present policy.

Question #3: Reliability of DoD AIDS testing. The Department of Defense AIDS testing program has been cited as having an extremely low false-positive rate. How has this accuracy rate been achieved?

Answer: In response to this question, the system used by the Army, which has cited a false positive rate of 1 in 100,000 persons tested, will be used to demonstrate how this has been accomplished.

(1) A redundant multi-step testing algorithm was carefully designed to virtually eliminate false positive test results. Steps in this algorithm are as follows:

- (a) The blood test is first tested by screening ELISA.
- (b) If the blood specimen is positive on the first screening ELISA test, it is retested in duplicate by screening ELISA.
- (c) If the specimen is repeatedly positive by screening ELISA, it is tested by Western blot.
- (d) If the specimen is positive by Western blot, the individual is informed of the results by a physician and advised to submit a second blood sample for testing.

(2) After Western blot testing, all repeatedly reactive ELISA samples are shipped to the Walter Reed Quality Assurance Section where they are stored in a frozen serum bank. The specimens are accessible for additional testing in difficult or unusual cases.

(3) Every Western blot is examined by an experienced Quality Assurance Officer. Photographs of every Western blot are maintained and are readily accessible for review.

(4) Known positive and negative control sera constitute 5 to 10% of all blots in any test run. Control results must be accurate before results are released.

(5) The contracting laboratory is provided directly with an "open panel" for Western blot testing each month. The "open panel" consists of twenty unknown positive or negative serum samples. The contractor must perform Western blot tests on each of these samples and submit results to the Walter Reed Quality Assurance Section.

(6) The contract laboratory is indirectly provided a "blind panel" consisting of 100 unknown positive and negative serum samples each month. The specimens are placed in serum tubes indistinguishable from the thousands of tubes routinely submitted each day and routed through one of the blood drawing sites to the contract laboratory. Through this mechanism, the contractor is not aware which specimens are part of the "blind panel". The contractor tests the specimens by the standard algorithm and reports the results back to the blood drawing site. The Walter Reed Quality Assurance Section reviews the results of tests on the "blind panel" samples.

(7) Stiff penalties are built into the contract for poor performance on either the "open" or "blind" panel. Failure to achieve 95% accuracy on either panel obligates the contractor to repeat every Western blot performed during the preceding month, or default on the contract. (Note: Over the two years of Army HIV testing programs, contractor performance on panels has always exceeded this 95% minimum performance.)

(8) Results of Western blots performed by the contractor are periodically compared to results on the same specimens obtained by the Walter Reed Quality Assurance Section using newer alternative technologies such as radioimmunoprecipitation or immunoassays based on antigens produced through recombinant DNA technology.

The quality assurance programs and experience with the contractor have been virtually identical for all the Services.

Question #6: Stationing of U.S. military personnel in high-risk areas. Does the Defense Department in any way restrict our military personnel in high AIDS infection countries?

Answer: No. Military personnel are not restricted from taking leave or from being assigned permanently or temporarily to any area of the globe due to a high prevalence of AIDS or any other disease. Military policy has always been to vaccinate personnel against endemic disease whenever possible and to provide education to reduce the risk of disease transmission. DoD has an aggressive education program to reduce the risk of transmission of HIV to military and civilian personnel worldwide.

Responses of Dr. Clinton to Questions Asked by Senator Helms

Question #6: Given the long and variable period between contracting the virus and developing antibodies for detection purposes, how does DoD plan to protect the military's blood supply?

Answer: Armed Services Blood Program Office policies, Food and Drug Administration guidelines, and accreditation requirements of the American Association of Blood Banks are followed by the Military Departments and Unified and Specified Commands and by civilian blood agencies collecting blood on military installations.

The transmission of HIV by blood has been almost completely eliminated by the screening of blood. Such screening of donated blood began in April 1985 and has reduced the risk associated with transfused blood products to an extremely low level. Although transmission by a seronegative unit of blood has been reported by the Centers for Disease Control, it is currently estimated that even with a false negative rate of 3 percent with the ELISA method, a "worst-case scenario", the risk of infection from a transfused unit of blood is between 1 in 100,000 and 1 in 1,000,000.

The Armed Forces Blood Program has screened approximately 419,329 units of blood since 1985. The Western blot confirmed antibody positive rate for the quarter, April - June 1987, was 0.4 per 1000 units tested.

Question #7: What is the male to female ratio of DoD recruits in the Washington, D.C., area who test positive? How does that ratio compare to the ratios in Central Africa? What is the significance of this figure?

Answer: Since October 1985, 594 female and 2,322 male recruit applicants have been tested from the Washington, D.C., area. Of these, 2 females and 33 males tested positive for the presence of the HIV antibody. The female rate is 3.4 positive/1000 tested and the male rate is 14.2 positive/1000 tested. The male to female ratio of DoD recruit applicants from Washington, D.C., is 4.2/1. The ratio of male to females in Central Africa has been reported as 1/1. Considering the small number of recruit applicants testing positive and the lack of risk factor information for these recruit applicants, no comparison can be made with this recruit applicant population.

Question #9: Are HIV positive personnel that are food handlers, medical personnel, and dental personnel allowed to continue in their normal military occupations? -If so, are the troops aware of who is tested positive?

Answer: HIV positive personnel who are food handlers are allowed to continue in their normal military occupations. HIV infection has never been documented as being transmitted through the food chain. Medical and dental personnel who test HIV positive are evaluated on an individual basis. The Services have in some cases limited individuals to the practice of medicine or dentistry that does not involve invasive procedures. The names of HIV positive individuals are known only to appropriate supervisors, medical personnel, and appropriate civilian health authorities where applicable by law.

Response to Questions for the Record on AIDS Epidemic

Senator Helms: Please be specific by country and by army in those countries as to degree of HIV infection and number of AIDS cases.

A: The degree of HIV infection and number of AIDS cases in Central Africa is unknown because of poor health reporting within the countries and reluctance of countries to admit the extent of the AIDS problem. In addition, "AIDS deaths" usually result from opportunistic infections or other infectious diseases such as tuberculosis. Deaths are attributed to the infectious disease rather than AIDS, the underlying cause. The best estimate of HIV prevalence is based on anecdotal reporting and limited sample surveys. These estimates place HIV prevalence between 1 and 30 percent of the sexually active urban population (15-49 year age group) in the region and a significantly lower prevalence (0.1 to 2 percent) in rural areas. Military personnel are generally considered to be at higher risk of HIV infection and may have a somewhat higher HIV prevalence.

Senator Helms: I believe that you need to look at all your classifications to see if they are justified to keep secret the facts from the American people. Please provide the Committee the rationale for keeping classified material necessary to assess the global threat AIDS poses to American security.

A: Currently, the vast majority of all data available on the global spread of AIDS are derived from unclassified sources. However, available open-source data are often anecdotal, incomplete, and non-empirical.

Some foreign governments have provided agencies of the U.S. Government (USG) with candid information on the incidence and prevalence of AIDS in their countries in conjunction with USG AIDS assistance programs. This information is provided with the strict understanding that it remain confidential. Such proprietary information must be protected, particularly in light of the perceived international stigma of AIDS. Therefore, the primary justification for maintaining classified data remains the protection of sources and methods, to ensure the continued flow of information.

DoD recognizes that it bears a responsibility to provide as complete a picture as possible of the non-domestic AIDS threat. Within the purview of DoD classification authority, strict examination of AIDS-related information is ongoing.

SENATOR JESSE HELMS' QUESTIONS FOR DR. MASON

How does the development of AIDS, from infection until the onset of clinical disease, differ in Central African patients as compared to those in the U.S.?

ANSWER

There is no significant difference in the latency period in African patients compared to U.S. patients.

How does the clinical course of AIDS differ in Central African patients as compared to those in the U.S.?

ANSWER

There is a higher death rate among AIDS patients in Africa compared to U.S. AIDS patients. This is most likely due to the greater availability of diagnostic and treatment capabilities in the United States. The opportunistic infections of AIDS in Africa are basically the same as in the United States, but the proportions in the rate of occurrence in AIDS patients differ.

What percentage of the Central African population has been infected with the HIV virus? What percentage has progressed to clinical AIDS? How do these figures compare to the U.S.?

ANSWER

As of November 11, 1987, a total of 3,251 AIDS cases have been reported to WHO from Central Africa (Central African Republic-254, Congo-250, Zaire-335, Rwanda-705, Burundi-569, Uganda-1,138). The number of people in Central Africa that are infected with HIV is unknown, but the few serosurveys which have been conducted show adult prevalence rates of 4 to 10 percent in the urban areas and <1 percent in the rural areas. WHO estimates that AIDS cases reported are greatly underestimated from the true number, perhaps by a factor of 10, and that the number of people infected with HIV may be 10 to 100 times the number of AIDS cases. Therefore, for these countries according to WHO estimates, the number of HIV-infected persons may range from 325,100 to 3,251,000. In the United States, where many more studies have been conducted and reporting is much more complete, 43,533 AIDS cases were reported for the same date. Using mathematical models, it is estimated that approximately 1-1 1/2 million persons in the United States are presently infected with HIV.

What accounts for the tremendously high rate of infection and disease in Central Africa? Do you anticipate that this will progress to involve the entire sexually active population?

ANSWER

Many factors may account for the increased rate of HIV infection in Africa, including local social and cultural customs (particularly with regard to sexual practices), the prevalence of genital ulcer disease and

other sexually transmitted diseases, the presence of other endemic diseases and conditions which may be acting as cofactors, and the continued risks associated with blood transfusion and use of unsterile equipment used for injections. Since the prevalence of many of these factors differs considerably from urban areas to rural and from country to country, it is unlikely that HIV infection will involve the entire sexually active population.

In the U.S. the male:female ratio of the disease is approximately 13:1. In Central Africa the ratio is 1:1, which is what may be expected for sexually transmitted disease. How do you explain the discrepancy?

ANSWER

One plausible reason for the widely varying male to female ratios is the supposition that HIV infection was initially introduced into the United States in the male homosexual community and has spread rapidly in that community. Therefore, males are much more likely to be infected. A greater number of drug abusers are also male, again making males more likely to be infected. In many parts of Africa, the prevalence of genital ulcer disease from other sexually transmitted diseases is also very high, which may facilitate HIV transmission due to the open sores. Other unknown factors may also be important.

Can we expect the same pattern of infection (male:female ratio = 1:1) to eventually predominate in the United States? If not, why not? What reason is there to believe that eventually extensive heterosexual spread will not occur in the United States?

ANSWER

Due to many possible differences in sexual activity (e.g., frequency of sexual contact, lack of acceptance and availability of condoms, different sexual practices, including bisexual/homosexual activities) and the high prevalence of genital ulcer disease in Africa, it is unlikely that the male-to-female ratio of AIDS cases will become 1:1 in the United States. Cases of heterosexually transmitted AIDS will continue to occur in this country; and, if no preventive efforts were made, heterosexually transmitted AIDS might eventually predominate. However, preventive efforts are being made. Prevention and control programs to educate and counsel persons at risk, HIV screening and self deferral programs to insure a safer blood supply, and drug-abuse treatment programs, may prevent heterosexual transmission from becoming the major mode of HIV spread in the United States.

Can we anticipate that eventually similar percentages of the U.S. population will be infected -- and eventually die of the disease?

ANSWER

Because of intervention programs and the better availability of medical treatment and facilities, we do not think that the outcome of AIDS in

Africa can be equated with that of the United States.

Why is there a prolonged latent (typically 4-10 years) between infection and onset of clinical disease? Are not infected persons themselves infectious to others during this time?

ANSWER

It is not known why there is a prolonged and variable latency period between HIV infection and development of AIDS. Many other viral diseases have similar characteristics (e.g., hepatitis B virus infection and the development of primary liver cancer, Epstein-Barr virus and Burkitt's lymphoma and nasopharyngeal carcinoma, HTLV-1 and lymphoma-leukemia). The virus is believed to remain in a dormant stage in the cell until there is a breakdown in the immune system or some other factors which may activate viral replication and oncogenesis. In persons with asymptomatic HIV infection, it is apparent that transmission of HIV infection can occur.

Are they infectious before becoming sero-positive in the HIV detection test? How long is the period after an individual is infected and before the antibody is detectable? How many months of total abstinence must elapse before a negative test is conclusive?

ANSWER

Persons infected with HIV can transmit the infection to others before developing a positive HIV antibody test. In most persons, the antibody test becomes positive within 6 to 12 weeks after infection, although longer periods for seroconversion have been suggested in a few reports. For counseling purposes, it is reasonable to assume that if a person remains seronegative for 6 months following an exposure to HIV, they are not infected.

What is the course of this care for U.S. patients? (estimated \$40,000 to \$200,000+ per patient during last 2 years of life -- an estimated \$8 billion to \$16 billion for all U.S. patients, by 1991).

ANSWER

Several studies have documented the lifetime costs for treating AIDS patients. The earliest study placed that cost at \$147,000 per patient. With experience, other more recent studies have estimated the cost to be between \$40,000 and \$70,000 per patient. Costs appear to be decreasing over time due to decreases in numbers of hospital admissions and lengths of stay. Several factors have been associated with differences in costs among AIDS patients, including type and number of opportunistic diseases, intensive care utilization, and type of insurance coverage.

In terms of national health-care costs for AIDS, Scitovsky and Rice (Public Health Reports, January-February, 1987) estimated that personal health-care expenditures for AIDS in 1986 were between \$640 million and \$1.7 billion, or less than 0.5 percent of the expected total health-care

costs for all diseases in the United States. By 1991, the cost for health care for AIDS patients is estimated to be between \$3.5 and \$9.5 billion and will account for 1.2 to 2.5 percent of total health-care costs. To put these figures into perspective, the cost of treating AIDS patients in 1991 is expected to exceed the costs estimated for treating patients with end stage renal disease, lung cancer, or breast cancer.

Given the current status of treatment of AIDS in this country and its effectiveness, do you see a cure at this time or any promising prospect of one?

ANSWER

Azidothymidine (AZT), the only drug licensed specifically for the treatment of HIV infection, has been shown to prolong the lives of certain AIDS patients, but it is not a cure for AIDS. In addition, the drug is relatively toxic and quite expensive. A number of other compounds are now being evaluated in the laboratory and in clinical trials. The efficacies and toxicities of these compounds remain to be determined. However, antiviral therapy is unlikely to eradicate HIV infection. Rather, such therapy may suppress infection and delay the onset of disease.

If isolation would not be effective in Central Africa, would it be effective in this country if imposed early enough?

ANSWER

Prevention of HIV transmission through medical isolation or quarantine would require identifying all HIV-infected persons (estimated to be 1 - 1 1/2 million) and supervising them to the degree necessary to preclude their engaging in sexual intercourse with noninfected persons or IV drug use with sharing of needles. Therefore, this strategy is impractical as a method for controlling AIDS and HIV transmission in the United States.

Does the Centers for Disease Control have current plans to undertake the development of a global epidemiological model? Would the data collected include both rates of infection as well as AIDS cases? Would the occurrence of new cases be assimilated on a regular bases? How often?

ANSWER

There are presently no plans at CDC to develop an independent global model for AIDS prevalence and incidence. WHO and USAID are currently developing these models. CDC continues to provide technical assistance to WHO and USAID in these efforts.